



**THE
AMERICAN
SKYSCRAPER**

1850-1940

**A
Celebration
of Height**

**Joseph J.
Korom, Jr.**

The American Skyscraper **1850-1940**

A Celebration of Height

Joseph J. Korom, Jr.

Branden Books
Boston

This One



YSNY-4ZN-LAKN

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Library of Congress Cataloging-in-Publication Data

Korom, Joseph J.

The American skyscraper, 1850-1940 : a celebration of height / Joseph J.Korom.

p. cm.

Includes bibliographical references and index.

ISBN-10: 0-8283-2188-4

ISBN-13: 978-0-8283-2188-4 (alk. paper)

1. Skyscrapers--United States--History--19th century.

2. Skyscrapers--United States--History--20th century.

I. Title. NA6232.K67 2008 720'.4830973--dc22

2008014594



Branden Books
(Division of Branden Publishing Company, Inc.)
PO Box 812094
Wellesley MA 02482
Boston

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To my Sandy...
a million thanks for your countless sacrifices.

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Acknowledgments

I wish to thank the following corporations and organizations for their contributions of information to this project:

American Institute of Architects
American International Group, Inc., New York City
Amoco Oil Company, Chicago
Architecture Archives, Carnegie Mellon University, Pittsburgh
The Art Deco Society of California, San Francisco
The Athenaeum of Philadelphia
Art Institute of Chicago
Atlanta History Center
Baltimore County Office of Planning
Baltimore County Public Library
The Bostonian Society
The Brooklyn Public Library
Buchbinder & Warren Real Estate Insurance, New York City
Central Library of Rochester and Monroe County, Rochester, New York
The Chase Manhattan Bank, NA., New York City
Chicago Historical Society
Chicago History Museum
Chicago Tribune Company, Chicago
Chrysler Corporation, Highland Park, MI.
Columbia University, New York City
Commercial National Bank, Shreveport
Council on Tall Buildings and Urban Habitat, Lehigh University, Bethlehem, PA.
The Courier-Journal, Louisville
Dayton & Montgomery County Public Library
Denver Public Library
EaselWeasel
The Equitable Life Assurance Society, New York City
The Filson Club Historical Society, Louisville
F.W. Woolworth Corporation, New York City
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History Images
Joseph Pell Lombardy and Associates, Architects, New York City
Landmarks Association of St. Louis
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Lincoln Library, Springfield, IL.
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Museum of the City of New York, New York City
National Trust for Historic Preservation
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The New York Times Company, New York City
Newark Public Library
News Press, St. Joseph, Missouri
Oakland Public Library
Ohio Historic Preservation Office, Ohio Historical Center, Columbus
Omni Parker House Hotel, Boston
One Broadway/La Salle Partners, New York City
Oregon Historical Society, Portland
Otis Elevator Company, United Technologies, Farmington, CT.
Pabst Brewing Company, Milwaukee
Picture History LLC
Pittsburgh History & Landmarks Foundation
Pittsburgh Post-Gazette, Pittsburgh
Preservation League of New York State
Richmond Public Library, Richmond, VA.
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Toledo-Lucas County Public Library, Toledo
U.S. Department of the Interior, National Park Service, Washington, D.C.
The Western Reserve Historical Society, Cleveland
Western Union Company, Paramus, NJ.
Westinghouse Electric Corporation, Pittsburgh
Wisconsin Historical Society
Wm. Wrigley Jr. Company, Chicago

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INTRODUCTION

Gravity is obsolete. The ironworker with tree-limb arms said so. The engineer with a pencil wedged behind his ear also said so. The cleaning woman on the thirty-ninth floor with heavy pail of soapy water only suspects so. The tug of terra firma, a once-mighty force that demanded tribute be paid by short and squat shelters thrown up by man and king, was rendered a mere nuisance. The skyscraper was the culprit and the faces of cities were forever changed.

Very tall buildings, those now known as "skyscrapers," were invented here—in America. Just before the Civil War a few buildings in some eastern cities were, for a variety of reasons, piled higher than most with extra floors. Attention was paid by a meager few and life went on without thunderclap or tremor. What no one could possibly have imagined, then, was that the seeds of a new architecture were being sown.



(1) Secular humanism in all its glory proclaiming that "Man is the measure of all things," of course with the skyscraper as a powerful image.

Our species is a species of builders. After inhabiting trees for a short while, where we felt safe and from where we could survey the plains, we timidly left our arboreal homes and sought refuge in more permanent surroundings. After a very long time, and when the requisite technology presented itself, we began to build tall. At first "tall" was a state of mind and of course a subjective concept; there still is no accurate definition and "tallness" is still bandied back and forth without resolution. We know a tall building when we see it and so did our early ancestors. Somewhere deep in our psyche, and for an awful long time, we humans have harbored the irrepressible desire to occupy the "high ground," to dominate a hilltop, a defensible wall, a fortified tower, or to visit the topmost spaces of campanili, a guild hall, a church spire, or a minaret. Humans built tall for many reasons: to do so was communally satisfying, personally fulfilling, and perhaps most of all it was a celebratory act—for everyone. To build tall was defiant, it was risky and it was scary but inherent in these anxieties was the conquering of *height* itself, to pierce the sky with a manmade object while still tethered to the ground was simply irresistible. In time humans occupied the domain of birds and overlooked the treetops from whence they came eons earlier.

The euphoric feeling of accomplishment, the overwhelming sense of satisfaction and pride of achievement upon attaining a difficult goal is a quality that has been with us, as a species, for a very, very long time. To build, and to *inhabit* what we have made with our hands, causes within us a celebration, a feeling that seems to be magnified the larger the project. We, ironworkers, accountants, and traffic cops, experience a sense of collective ownership of the *skyscraper*; it is *our skyscraper*. We are satisfied with the completion of a one story building but that does not constitute the *celebration of height* that is unleashed with the topping-off of a skyscraper. Something special happens with *height*, the very essence of being above the rest is the impetus for much of what is featured in this book. The skyscraper is simply the natural outgrowth of imagination and drive, and of course a thorough understanding of earth's natural forces and their resolutions. But it is also more than that. And those intangibles, whether they are cultural pride, individual ego, corporate power, urban rivalry, personal economic gain, or all these, suggest that the tall building will accompany us all to the end of time. Will there someday be a 200-story building? Almost certainly.

This *celebration*, the *celebration of height* follows that we humans have bartered with gravity and secured a victory, shallow though it may be. Stuff still falls to the floor but now it's the fifty-ninth floor. We *celebrate* the push upward to be nearer the clouds and we *celebrate* our tussle with nature, gratified it allows us the notion of supremacy. We can now build higher than ever before and realize the *celebration of height* is primal and constant.

The skyscraper is a relatively new object, that is, relative to the custom of human burial, the discovery of fire, the practice of agriculture, and human habitation in cities. But, it is also a newcomer when compared to the sinuous Great Wall of China, Europe's towering Gothic cathedrals, and Mexico's haunting Temple of the Moon at Teotihuacan. The skyscraper, as an invention that has been acted upon and carried to its ultimate conclusion, predates a host of important technological advancements of the nineteenth and twentieth century, inventions often considered modern milestones. The skyscraper existed before the invention of the light bulb, the telephone, the automobile, the airplane, motion pictures, and of course radio and television. Skyscrapers ruled the skies of American cities and towns before women and blacks could legally vote, before there was penicillin, before bubble gum and the NFL, and even before the advent of a permanent national

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income tax – once the derrick man, welder, and bolt-boy kept *all* doled them from the paymaster.



(2) St. Barbara, the patron saint of architects, is aptly seated in front of the tallest and most important building type of the Middle Ages. Harper's New Monthly Magazine, No. CCCXXXV. April, 1878, Vol. LVI "Old Flemish Masters", p.703.

What quietly began some 150 years ago has evolved into a spectacular vehicle of artistic expression, imagination, the mastery of mathematics, and unequaled engineering prowess. Since the time of King Zoser's pyramid, the first monumental stone building of mankind, to the erection of the New York Tribune and the Western Union Buildings, architects struggled to come to terms with beauty and the load bearing wall—the scourge of the tall building. Inventions surfaced, which were summarily refined, ameliorating weighty walls and delicate facades. The new thinking rendered gravity, a force once to be scorned, an annoyance to be overcome; buildings pushed higher in contempt of the ceaselessness of this planet's pull. The *skyscraper* is the building of the brave, not the timid. The riveter, rivet catcher, and bucket-up have insisted so.

The American skyscraper, no matter its architectural style, massing, or age, accomplishes what it purports to accomplish, namely it promises places for workers and residents, and, in a much broader sense it simply provides shelter for people. Furthermore, the American skyscraper is an exciting building type, romantic, daring and inspirational – qualities that underline what meaningful architecture is all about. The developer clutching leases and expensive fountain pens, the architect with T-square in hand, and the water-boy, the quencher of chapped lips, saw to that.

Architecture is story telling and *The American Skyscraper 1850-1940* is the chronicle of the American skyscraper, this country's unique contribution to architecture—a discipline referred to as the most scientific of the arts and the most artistic of the sciences. The American skyscraper has championed both art and science and remains a symbol of America's financial and technological superiority. *The American Skyscraper 1850-1940*

is also a testament to the nameless thousands who contributed to the erection of tall buildings, to the dozens of trades, to the "white collars" and the "blue collars" and the teamsters whose wagons were filled with bags of concrete, wood planks, and metal lunch boxes smelling of sausage and bread and onions. Mustachioed immigrants and homegrown cigar chompers, some with bearded faces, were the brave men of the new tall buildings. These early towers were built using some of the most primitive methods known—time tested but nonetheless rudimentary. Horsepower vied with steam power and the shear muscle of man. It was because of the pioneers described in this text—those skyscrapers with antique-sounding names like Montauk, Boreel, Monadnock, Yondorf, Gaff, Coal and Iron Exchange, and Domestic Sewing Machine, that the skyscraper, as an art form and business tool, exists today. Architects of the super-tall structures of the twenty first century must realize that they are standing on the shoulders of giants, on the accomplishments of men whose names are long-forgotten but whose contributions were seminal; when you look at a skyscraper you look back in time.

The first tower, of which we hear as built upon the earth, was certainly built in a species of aspiration; but I do not suppose that any one here will think it was a religious one. "Go to now. Let us build a tower whose top may reach unto Heaven." From that day to this, whenever men have become skilful [sic] architects at all, there has been a tendency in them to build high; not in any religious feeling, but in mere exuberance of spirit and power—as they dance or sing—with a certain mingling of vanity—like the feeling in which a child builds a tower of cards; and, in nobler instances, with also a strong sense of, and delight in the majesty, height, and strength of the building itself, such as we have in that of a lofty tree or a peaked mountain.¹

Worldwide, there are now 121,548 skyscrapers—buildings that stand twelve stories or taller—according to Emporis (2006-06-06). Residing in over 10,000 cities, these tall structures have become universal symbols of urbanity, sophistication, and wealth. By virtue of their proliferation, the invention of the skyscraper was confirmed profound and its maturation during the nineteenth century recognized as nothing less than extraordinary. The 1890's beam walkers and brick layers would be pleased.

The Sky-scraper

There was a time when, unless one labored on a clipper ship, a person would not know the word "sky-scraper." There was also a time when this noun's spelling was not consistent; eventually linguists voted the hyphen out with "skyscraper" prevailing. There was also a time when there were no buildings taller than five floors.

In most English dictionaries we are offered the definition of a skyscraper as "a very tall building" or "a very tall building with many stories." These are nebulous answers at best and definitions that simply will not do. The idea of what constitutes a *skyscraper* has been bandied about since the term's inception (with regards to architecture) sometime during the 1880's. Till then "skyscraper" referred only to a "skysail of a triangular form...a name for one of the fancy sails alleged to have been sometimes set above the skysail."² America's newest term challenged academic, financial and construction circles, those who searched for a true and accurate definition of "skyscraper." Architects were equally baffled; they knew one when they saw one but they, too, were hard pressed for a meaningful definition. How many floors did a building need before it was classified a skyscraper? How tall was tall?

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The eminent Col. W.A. Starrett, the builder of many skyscrapers weighed in with the following opinion in 1928:

"A 'skyscraper' said Maitland's American Slang Dictionary in 1891, the earliest known definition, is 'a very tall building such as now are being built in Chicago.' Literally, a skyscraper is any tall building, but to a builder it implies a steel skeleton incased in a wall that is merely a drapery. There are high masonry buildings and there are some three hundred and fifty reinforced structures of ten stories or more in the United States, the highest a twenty-one story office building in Dayton, Ohio; but though reinforced concrete is as modern a building material as steel, and a sharp contender with it in virtually the whole field of construction, we do not think of a concrete structure when we say skyscraper."³

Why? Starrett also penned the following: "Defining the skyscraper has proven to be a problem of almost inexhaustible fascination."⁴

In *The History of the Skyscraper*, published in 1929, Francisco Mujica insisted only buildings possessing "great height" and those "constructed on a steel skeleton and provided with high speed electric elevators" could be classified a *skyscraper*.⁵

In 1984, Donald Martin Reynolds claimed "...the term 'skyscraper' has its origins in Italy in the thirteenth century, referring to the new heights buildings had reached there (towers exceeded heights of modern fifteen-story skyscrapers), in modern times it refers to tall buildings of steel-skeleton construction with high-speed elevators."⁶

The noted architectural historian, Carl W. Condit, offered the following, claiming that the definition of a skyscraper is too often an "unacceptably narrow idea." The skyscraper, he contended, "...is a great deal more complex than what has always been claimed. I am going to use the word *skyscraper* for convenience, but it applies to any large multistory commercial, public, or residential building regardless of its shape or height."⁷

In *The Skyscraper*, published by W.C. Clark and J.L. Kingston in 1930, advanced the opinion, "It will be enlightening to recall at the start that the public controversy over the skyscraper is by no means a new phenomenon; with more or less vehemence it has raged almost continually since the completion of the Tacoma Building in the city of Chicago about forty years ago ushered in the era of the skeleton steel frame building which is the true skyscraper."⁸ Just who did invent the skyscraper and the steel frame?

The 1898 tome, *A History of Real Estate, Building and Architecture in New York City During the Last Quarter of a Century*, records the following:

Great as was the apparent novelty of the skeleton conception in the first high building, as widely as it has been adopted in constructing high buildings in the larger of the American cities, it lacks however, the dramatic feature of a birth from one inventive brain. Like the cage construction it may be said to have been incubated, rather than invented...⁹

The *Architectural Record*, writing in 1928, stated:

Sam Loring, a terra cotta manufacturer, is given credit for the idea of adapting terra cotta to the iron frame, but no single person is recorded as the inventor of the steel frame. The developments of a generation were required to perfect the engineering principles involved in skyscraper construction, and to this development many American architects contributed a part.¹⁰

And finally, in 1986, Thomas A.P. van Leeuwen, professor of architectural history at the University of Leyden, contributed: "With a few exceptions, it is generally accepted opinion that the skyscraper is an unequivocal and explicable thing: A tall commercial building."

Another Definition

Simply put a skyscraper is any multi-story office, residential, or commercial building that was usually (many of the very early ones had only stairs) fitted with a with a passenger elevator. It must possess spirit, stand taller than most and be visible from a great distance. The early ones, our first skyscrapers, challenged the sky in a manner than was altogether new. The first skyscrapers embodied the senses of experiment, struggle, conquest, and fantasy. They excited people; they were magical where iron and stone defied gravity, where skyscraper tops became invisible in the clouds and shrouds of ocean fogs. They stole sunlight from neighbors but nightly they charged the air around them with electric light, with twinkling lanterns and sharp beacons. These were the embodiment of energy blended with the potent force of great height and a sense of collective ownership.



An interesting moment during construction of the Post Office and Government Bldg.



(3) The 1905 topping out of Chicago's new Federal Building was celebrated by ironworkers.

(4) The Chicago Federal Building (Henry Ives Cobb, demolished 1965) was not recognized as a skyscraper despite its eight stories, elevators, and its steel frame. Its 300-foot-high dome was the equivalent of a twenty-five story tower. Must skyscrapers be taller than they are wide?

The concept of "skyscraper" is notoriously difficult to define in absolute terms. Fundamentally, all *tall* buildings "*scrape the sky*" and they do so in a variety of ways. Chicago's twenty-four story Merchandise Mart (1931) rises 340 feet but at 724 feet is more than twice as wide. New York's eleven-story Tower Building (1889) reached 129 feet high but at its narrowest measured only twenty-one feet six inches. The ten-story Heineman Building (1910) stands 136 feet tall but is only twenty feet wide.¹¹

This San Francisco sliver contains a lobby that measures only four feet square and presents an instance whereby its lobby is smaller than its elevator. These are skyscrapers.

Some of the earliest skyscrapers were held up by load bearing walls. These, even at eight stories, towered over some ninety-nine percent of all structures. To the casual observer and to the tenant of any skyscraper it is not apparent if the building stands by means of brick bearing walls, a concrete frame, or steel or iron skeleton; as often occurred before the year 1900, a combination of these structural methods were employed for a single building. Structural type cannot be a deciding factor since dozens of early tall buildings without metal frames *were, and are, indeed skyscrapers.*¹²

The stone-walled Western Union Telegraph Building in New York (1875) and Cincinnati's Ingalls Building (1904), with its *concrete* frame, were architectural trailblazers. These are skyscrapers.

Any building in which people either live or work, and that which includes a passenger elevator, suggests a building of at least five floors.¹³ It also should not matter what type of elevator was installed in any building. A steam, hydraulic or electric driven cab is irrelevant and should not prevent any building from being classified a skyscraper. Chicago's five-story Reaper Block (1873) and the eight-story Grand Pacific Hotel (1873) were some of the first to possess passenger elevators no matter how they were powered. These were skyscrapers.

A ten-story building in an 1890's-small town would undeniably be a skyscraper by virtue of its preeminent presence on the skyline. The same building in New York would also be considered a skyscraper-though lost on the skyline. Time, place, and culture are indeed relative. To those in 1900 Small-Town, Nebraska, a seven-story skyscraper might well be one-hundred stories high.

There can be no *arbitrary* floor limits. Skyscrapers are too magnificent to trivialize and should be celebrated for the masterpieces they are.



(5) Chicago's Sears Tower is the ultimate expression of skyscraper technology and is the embodiment of vertical manifest destiny. It stands 110 floors, 1,454 feet tall, and is North America's tallest skyscraper. When the sun sets pedestrians at the Sears Tower's base are plunged into shade. But due to the curvature of the earth shade covers the tower's floors from bottom moving upward at the rate of one floor per second. Consequently, those at the building's top enjoy approximately two more minutes of sunlight than those on the street. It is doubtful that Louis Sullivan could have conceived of such a phenomenon. Photo by author.

Notes on the Text

The American Skyscraper 1850-1940 is a history book. Between its covers are the stories of 287 American skyscrapers which were, or still are, located in seventy-one cities and towns. New York is most represented with eighty-seven, followed by Chicago with sixty, and Philadelphia with thirteen entries; the remaining profiled buildings are scattered throughout the country with thirty-eight cities and towns boasting a single offering. The information presented has been exhaustively researched. Although exact authoritative numbers are difficult to come by, this author is satisfied that all data is the most accurate and complete available. Each skyscraper is identified by its *original* name and its location. The architect, or firm of record, is listed along with the city in which the architect / firm practiced. The date marks the year of the building's *completion*.

All heights are measured upward from the floor / sidewalk surface directly in front of the building's principal entrance. Measurements include the highest, topmost part of the skyscraper, that is, to the apex of the *highest integral part of the structure itself*. No flagpoles, chimneys, water towers, signs, communication antennas or dishes, or any other temporary add-on is ever included. Domes, spires, towers, and penthouses are included as they are actually and physically part of the building structure; without their "participation" the building as we know it would not exist. With these, their contributions become fundamental to the building's artistic expression, as with the Chrysler Building's spire or the Jewelers Building's dome.

Chapter One

Courageous Beginnings

1850-1874

Commerce Princes and Tall Palaces

Business buildings have existed for millennia. There were counting houses in ancient Babylon, Rome, and Alexandria. Offices for transacting government business were erected throughout the Roman Empire and Asia. Later, more "modern" banking was institutionalized in Venice, Florence and Milan. During the Renaissance London, Paris, and Amsterdam also became preeminent. The great merchant houses of Europe, in tandem with powerful shipping concerns, required blocks of office space in the cores of their respective cities. Stone-faced banks, with wood cubicles inside occupied with clerks and barristers, shouldered the narrow streets and vied with markets and guild halls for the stingy sunlight of northern Europe. Money was made and counted and precious metal bars stacked. Soon, it would be New York's turn. Courage was everywhere.

Between 1850 and 1874 America struggled for an identity, achievable it rightly thought, through the buildings it erected. It strove, more like grappled, to set a stage for grander things to come, things in the form of buildings – architecture. We craved a style of architecture of our own. The 1850's and 1860's were a time of flux when America began to embrace the Industrial Revolution and when its cities were looking to assert their own identity. Ammi Burnham Young's Boston Custom House (1847) was a new temple that would someday support a thirty-two story skyscraper. And there within lies just one dichotomy.

The middle of the nineteenth century saw tall business buildings first emerge in America's large cities. These were structures that would not be identified as skyscrapers by current definition; still they were substantially taller than what was commonly experienced by most city folk. Standing no more than four or five stories, these buildings were used primarily for commerce, that is, office use often in combination with light manufacturing and with provisions for bulk storage. Few had passenger elevators and some offered warehouse type lifts for the movement of mass produced merchandise, garment

storage, and musty ledgers. The early tall buildings had thick walls of stone or brick, had few windows other than those on the street facades, and were provided with light whose source was the beeswax candle or, ultimately, the oil of the hapless whale; in time there would be gas. Staircases were narrow, floors were wood, and the walls thickly plastered. A privy was located at the far end of the site – usually only feet from the main structure on a tight lot – and there was no running water anywhere in the building.¹⁴ Heat was supplied by either wood or coal burning stoves strategically located throughout the building's workplaces - only. Before long there would be the central steam boiler.



(6) An office interior of the 1870's featured high ceilings, large light-emitting windows, and rolled cast iron columns. Immense wooden desks, large-faced wall clocks, and hanging light fixtures were hallmarks.

(7) This stove-type of 1884 was the "Universal" as it could be located almost anywhere for domestic, retail, commercial, and office use. Tall building owners could supply one or more of these per floor – popular because they also made coffee and tea. Source: Universal Stoves & Ranges, Cribben, Sexton & Co., Chicago, Illinois, 1884.

The business of America was tended to by the likes of Dr. David Jayne, Potter Palmer, Peter Cooper, James Gordon Bennett, Henry Baldwin Hyde, Samuel F.B. Morse, Horace Greeley, A.J. Trounstein and the Astors, Vanderbilts, and Fields'; these were the modern-day Medicis. There were many self-made men but few multi-nationals as currently defined. There were, however, builders. These gents made things happen, not in the sense of personally laying courses of brick or pinning beam and column, but in sponsoring the erection of structures that bequeathed to this new country an *American architecture*, a utilitarian art form all its own. They either built, or their corporations occupied, the "new" structures, the ostentatious office blocks of lower Manhattan and elsewhere.



(8) Zachary Taylor (1784-1850) served as President of the United States during the planning and erection of the famed Jayne Building in Philadelphia. Knowing that "Old Rough and Ready" was in charge helps place the birth of the American skyscraper in historical context.

24 Joseph J. Korom, Jr.

In 1850 the office of United States President was shared by Zachary Taylor, and after his death on July 9th, Millard Fillmore stepped up to serve. Only thirty-one states existed and in some states one could own a horse and a cow, while in others one could own a horse and a cow and a man. Though streets were largely unpaved the sewing machine, railroad sleeping car, paper stapler, safety pin, and a manually-operated dishwasher were new and considered wonders of the age. When America's first skyscraper was completed in Philadelphia that being Dr. Jayne's nine-story wonder, the telegraph and Morse code were only twelve years old and the city in which the Jayne Building stood was America's fourth largest. The tower, that potions and pills built, was a harbinger of grander things to come.

Throughout the next three decades, the method of constructing multi-story office buildings changed little. The site of the new *tall palace* was chosen by one of America's *commerce princes*. It was there that he would employ his army of workers, where he would add to his fortune, and where his namesake would rise and forever be associated with him and his deeds. The site would be cleared of any shanty or chateau and its soil laboriously scooped up to be carted elsewhere.

A four, five, or six story office building of the immediate post-Civil War period was constructed more or less in the following manner. After a trying excavation involving teams of horses, mules, and men with picks and shovels, retaining walls were put up in anticipation of the thick foundation to follow:

...a close row of oak ties twelve feet long by ten inches thick were laid crosswise, bedded in sand, upon which four or five layers wide of twelve by twelve oak timbers were laid, from thirty to sixty feet long, firmly bedded in cement. Upon this mass of timbers was laid [sic] the stone foundations, which consisted of three layers of stone; the first five feet wide, the second four feet six inches wide, the third three feet ten inches in width. Upon these followed a stone wall two and a half feet thick, to the top of the first story... For the purpose of preventing any dampness from the basement, furnace slag one and one-half feet deep was filled in and covered with one foot of cement, and joist [sic] bedded in them; over these was laid a heavy plank flooring.¹⁵

Floor heights were not uniform and ranged from thirteen feet to eighteen feet. A closely maintained grid of 220 cast iron columns (in this example), each sporting an elaborate Corinthian capital, shouldered massive floor beams. Floors were of finely dressed hard-wood and windows were of the "best French plate glass." The flat roof, hidden behind a prominent pediment and parapet wall was surfaced with closely-soldered tin. This building was of typical *cage construction* where exterior masonry load bearing walls and interior iron columns supported the building *in tandem*. It is important to remember that cast-iron columns were already in use as support members in business blocks in England as early as 1780. Only by 1840 did their appearance cause a stir on this side of the Atlantic.



(9) New York City's Old Fire Tower, an early, tall, metal building that still stands. It was designed by Julius Kroehl and constructed in 1856.

Two important structures were completed in New York during the 1850s, a fire watchtower (Julius B. Kroehl, engineer, 1855) and a school, the Cooper Union (Frederick A. Peterson, 1859).¹⁶ A city of wood and masonry structures demanded an efficient fire reporting system, and this was it. There were many towers like this in New York intended to alert nearby neighborhoods of any impending blaze. A large bell would be sounded and horse-drawn and men-drawn trucks would respond. The 47-foot tall watchtower was constructed with cast iron columns and beams – a complete metal skeleton in 1855! – and if its openings were filled with glass architectural history might have to be rewritten.



(10) The Cooper Union Building in New York remains a famous architectural, social, and political landmark.

(11) Peter Cooper (1791-1883), inventor, manufacturer, and philanthropist. He also manufactured the first structural beams for use in buildings and thus set the stage for skeleton construction, and ultimately, the skyscraper.

Cooper Union, on Manhattan's Lower East Side, is essentially a six-story brownstone-fronted school and office building. This is also one of the first buildings anywhere to possess a passenger elevator and the oldest extant building in America framed with steel beams. Cooper owned three foundries and rolled the first steel railroad rails, the same type he insisted be employed structurally in his building of 1859. He used these steel

beams as spanning members and rested these on the building's load bearing masonry walls. Fireproofing took the form of brick spanning courses between the steel rails.

America's banking and mercantile centers were becoming homes to hundreds of tall business buildings during the 1850's. These structures huddled around important thoroughfares, piers and wharves, government buildings, railroad terminals, and close to the nexus of other well-established businesses. There was an organic response to a need, to the wishes of the business and professional classes to more efficiently conduct business in more efficient buildings. These groups sought a synergistic relationship between themselves, their suppliers, sources of capital, government, and perhaps most important of all, their clients. With narrow center city lots and steep land prices the norm, economics suggested that business structures climb as high as practical. And that is exactly what happened. Practical, then, was five or six floors.

Having multiple business nodes New York saw the development of tall buildings in many busy commercial neighborhoods. The six-story Moffat Building (Thomas & Son, 1848), five-story Trinity Building (Richard Upjohn, 1853), six-story Gilsey Building (not to be confused with the hotel of the same name, John W. Ritch, 1854), five-story Harper & Brothers Publishers Building (James Bogardus and John B. Corlies, 1854), five-story New York Times (Thomas R. Jackson, 1858), and the five-story Bank of the State of New York (James Renwick, Jr., 1856) were a few of the more illustrious examples – in New York.

Chicago, too, boasted tall commercial buildings. As early as 1852 this "frontier town" could point to the five-story Lind Block. This was a celebrated structure, perhaps the most tangible piece of evidence that Chicago was indeed an established city and that it could expect to have a future. Till then the survival of many mid-continent cities was iffy but the erection of a five-story structure was a symbol of wealth, importance, and permanence. The brick-faced Lind Block measured ninety-four by eighty-two feet and was "...a typical example of the pre-fire era. The day of the engineer had not yet arrived; the buildings were largely products of the carpenter and the brick mason, with a modicum of planning and embellishment by the architects of the day."¹⁷ By the 1870's the role of the architect was far greater than it had been just twenty years earlier. Due to the great fire of 1871 architects from around the country converged on the city to seek their fame and fortune. Other early structure's of remarkable height – all stood six stories – were the Honore Block (Otis L. Wheelock, 1870), Nixon Building (Otto H. Matz, 1871), Honore Building (C.M. Palmer, 1872), Lord & Smith Building (Cochrane & Miller, 1872), and the Kendall Building (John M. Van Osdel, 1873).

During the Civil War and for a time thereafter marked the age of the Mansardic behemoths. These were stepping stones for the next generation of office buildings. They were large and supported large populations of office workers. And for the first time, and on a wide scale, buildings grew upward as height was seen as an advantage and as a phenomenon that could be conquered. America witnessed nothing quite like it before. In the center of America's major cities the cobbler shop, cigar store, dressmaker and druggist were being relocated for giant office buildings. This did not happen in 1750. This did not happen in 1820. It did begin in the 1860's and the process has not yet ceased. Boston's City Hall (Gridley Bryant and Arthur D. Gilman, 1865), Philadelphia's Federal Building (Alfred B. Mullett, c.1868) and Public Ledger Building (1868) were antecedents of later office buildings. Perhaps the most magnanimous Boston Mansardic was the Beebe Block (Carl Fehmer and William Ralph Emerson, c.1873). The James M. Beebe & Com-

pany erected this small mountain as its flagship dry goods emporium and corporate office. It stood five stories, plus one attic for good measure.

One structure that would certainly possess a commanding presence was the Cincinnati Federal Building, designed by architect Alfred B. Mullett in 1873 and completed twelve years later. Though a large office building, this was not a skyscraper by any means. This Federal Building was a massive stone pile that measured 364 feet wide by 164 feet deep. It stood atop two basements and featured "one vast business room, 132 by 225 feet, which, in addition to the usual compliment of side windows, has a large portion of its ceiling of glass, making a sky-light 63 by 220 feet."¹⁸ Impressive and somber, this was yet another Mansardic symbol of governmental power. The Cincinnati structure rose high above the sidewalks that girded it; to the cornice it measured ninety-five feet and to the top of its giant hip roof it measured 170 feet. This building only had *four floors*, plus two attic floors, and in height it was equivalent to many twelve and fifteen story towers of the coming decades. Courage was mustered and the four story building was stretched upward to avail itself of the potent force of height. Soon less bulk and more altitude would become the new mantra.



(12) Mountains of stone, like those of the famous Barre Granite Quarries in Barre, Vermont, would be worked into sumptuous architectural elements.

(13) The marble staircase of the Hotel Manhattan (Henry J. Hardenbergh, 1897) in New York was smooth, creamy, and butter-like in its presentation.

(14) Logs were laboriously harvested by man and transported by beast. Between the cart's wheels would be window frames, doors, crown and base molding, wainscoting, roll-top desks, chairs, shelving, cabinets, handrails, and flooring. Early skyscrapers were stuffed with forest products.

New York's A.T. Stewart & Company (John Kellum, 1862) also pointed the way to the future. The whole of its exterior was metal, more specifically cast iron. Alexander Turney Stewart (1802-1876) was a businessman extraordinaire. For this successful merchant of women's clothes New York architect John Kellum designed a five-story Italianate palazzo complete with an immense skylighted central court. Termed the "Iron Palace," this was the daily destination of thousands. Though based in the architecture of the Italian Renaissance it belied a distinct modernity. Here was one of the antecedents of the modern skyscraper. Its fenestration pattern was repetitious; its walls were glassy and below its flat roof the facades featured factory-produced metal components. Like other cast-iron buildings its exterior was painted white so the "stone blocks" and "marble columns" could more easily complete the ruse. This landmark was destroyed by fire in 1956.

The mid-19th century also marked the age of cast iron architecture in America, more specifically in New York. What began and eventually flourished in one mile-square neighborhood of Manhattan helped to set the tone for the skyscraper of the later century. Here could be found over 300 cast iron fronted business buildings many of which still survive. Much could be learned by later architects both structurally and aesthetically from these in this warehousing, retailing, and office district near Greenwich Village. Now known as the Cast Iron District, it is a living museum, America's Palatine Hill.

No matter if architect designed or conceived by a master builder, if in New York or Chicago, there was a limit to just how high any banker, merchant, or scrivener would climb to reach his or her office. Four floors were tolerable to most. Six floors was the limit in the new tall office buildings. A revolutionary invention was in the offing and courage was everywhere.

Passenger Elevators Arrive



(15) Manhattan's Haughwout Building was the first commercial building to employ a passenger elevator.
Photo by author.

On the corner of Broadway and Broome in Manhattan still stands one of America's most admired antebellum structures, the cast-iron fronted Haughwout Store. It was completed in 1857 for glass, china, silverware and chandelier merchant Eder V. Haughwout. This was the center of the trade in fine household goods and Haughwout's reputation was unblemished and celebrated enough to supply "chinaware to the White House." The five-story Haughwout Store was designed by architect John P. Gaynor and was jacketed with white-painted cast iron by the firm of Daniel Badger, of the Architectural Iron Works. It was executed in the Venetian palazzo style, a motif considered somewhat "modern" then

as it deviated from the Gothic and Greek revival styles. Like the A.T. Stewart Store the facades relish in repetition, celebrate the reality of factory-produced precision parts, and defy convention by eliminating any architectural contrivance representing a hierarchy over and above the *strength of visual unity*, of a "democratic" façade; no pavilion, pediment, dome, or other component existed to "steal the eye." More importantly, it was here that architectural history would change and where some argue skyscraper history begins. On March 23, 1857 the Haughwout Store was the recipient of a new and delightful invention, the safety passenger elevator. What made it safe was that the elevator car was equipped with a mechanical safety device employed to stop the fall of a car if the steel hoisting cable snapped. In that event steel wedges at the car's base would be automatically thrust into steel side racks and hold the car securely. It was capable of lifting one-half ton at the rate of forty feet per minute and it was the first of its kind anywhere. This passenger elevator was installed by Elisha Graves Otis (1811-1861), a Vermont-born mechanic, inventor, and eventual founder of the Otis Elevator Company. The elevator ascended and descended by means of a central steam power source connected to a series of shafts and belts deep within the building. Despite initial excitement the device's allure was apparently fleeting:

The idea of a department store then was new, a marriage between the street-level shop and the multi-story warehouse, but Otis' contribution to it was not a great success: the machinery was too noisy, the concept too novel, and the public preferred to trust the stairs to reach the fifth and highest floor before the lift was actually abandoned in 1860.¹⁹

With the death of Elisha Graves Otis at the beginning of the Civil War his sons Charles and Norton formed Otis Brothers & Company and continued in their father's tradition in Yonkers, New York. The refinement of the steam driven elevator and the inclusion of additional safety devices guaranteed a continued and prosperous business. Building owners in Chicago, San Francisco, Philadelphia, Cincinnati, and Boston clamored for the new inventions would be installed in their warehouse, mercantile, hotel and office buildings. The elevator was absolutely essential to the very existence of the skyscraper. Iron and steel support the towers, true enough, but they are not absolute requirements; there are many tall towers with load-bearing walls that are fitted with passenger elevators as a matter of comfort, ease, marketability, and economics. Business savvy demanded there inclusion into any structure whose owners sought a return on their investment.

Cincinnati's Trounstine Building (1864) is just such an example. The firm of A. & J. Trounstine was founded in 1844 and within only twenty years came to construct and occupy a six-story structure rising ninety feet tall. The building measured sixty-six by one-hundred feet and was the headquarters of an extensive importing and manufacturing fabric business. Bolts of fine cloth and wooden desks with ink wells shared space on all floors; routinely stock was relocated throughout the structure. Trounstine's accommodated its buyers and out-of-town merchants by announcing that its building sported "hydraulic elevators for passengers and goods." Chicago's Farwell Building (1864) had a steam-driven passenger elevator, and the Burley & Company Building (1870) featured a C. W. Baldwin manufactured hydraulic elevator. Boston's marble-fronted Sears Building (1868), a seven-story office structure by Cummings & Sears, boasted having that city's first passenger elevator. Boston's New England Mutual Life Insurance Building (1874) contained one *Whitier* passenger elevator while Minneapolis' City Hall (1873) boasted a steam-driven passenger elevator, one of the earliest west of the Mississippi River.

With the great and substantially taller Equitable Building (1870) on Broadway, the steam-driven passenger elevator entered the realm of the office tower. Soon hundreds of office building owners would seek out the new invention and by 1873 over 2,000 Otis elevators were in operation in hotels, stores, and office buildings throughout the country. The advent of the hydraulic elevator could propel a fully loaded elevator car at 600 to 800 feet per minute, far quicker than the "antiquated" steam type. In April, 1878 the first *Otis hydraulic* passenger elevator was installed in a Manhattan office building at 155 Broadway. Within the decade thousands of hydraulic or steam powered elevators will be installed throughout the country.

The Fifth Avenue Hotel (1859) in New York claimed the first installed elevator in a hotel, it harbored the Boston-manufactured *Otis Tufts* (coincidentally named) screw passenger elevator. New York's St. James Hotel (1866) boasted an Otis passenger elevator, and New York's Grand Hotel (1868) claimed the first electric-powered passenger elevators, but so too did the Stephen's Hotel (1872) on Broadway with its "vertical-gearied hydraulic electric" elevator, an invention of Boston's *Cyrus W. Baldwin*. Cincinnati's six-story Grand Hotel (1874) boasted 285 rooms and advertised that it was "...furnished with a direct-acting hydraulic passenger elevator, the shaft of which is 90 feet in length." Atlanta entered the elevator age in 1870 with the completion of the Kimball House Hotel and the first installation of a passenger elevator there. The once avoided upper floors of a hotel now took on a racier role as higher floors became adventuresome, their "atmospherically remote" rooms proved an escape and a sign of prestige.

Just what were these steam and hydraulic elevators like? The cars were more often than not metal rooms with wood paneling and small filigreed metal windows, brass doors with large perforated screens, allowed occupants to see out and measure their ascent or descent. Light was provided by sconces that burned oil or candles. Some cars were carpeted and featured a small stool or chair for passengers. A round rotating stool was reserved for the uniformed operator. Before the 1870's the cars were rather spartan. Only later, during the ostentatious 1890's, did the elevator car become a small "parlor."

There were distinct differences between the mechanics of early elevators. The steam-driven elevator relied upon a large boiler in the building's cellar that demanded to be stoked with coal. Water boiled producing steam power that allowed the elevator cars to rise. A boiler engineer or custodian was required to arrive hours before office tenants to ensure enough pressure was available to operate the elevators; tenants were not agreeable to waiting. Of course coal had to be in abundant supply or everyone took the steps. The consumption of coal was substantial since pressure had to be maintained even when the elevators were not in use. Disadvantages of the steam-driven elevator were the generation of heat, odors, ash, dust and dirt, and occasional vibration of the building or "disagreeable noises."

The water-ballasted passenger elevator was not the most common type but it could have been found in Rochester's Powers Block (1869). With this device, fitted with sheaves and cables, the car's weight was countered by a huge barrel of water. In order to lower the car the correct amount of water was mechanically siphoned out of the barrel, thus the barrel got lighter and the car descended. Conversely, to raise the car to serve upper floors, water was channeled into the barrel which propelled the car's occupants skyward. A "professional" elevator attendant controlled this device and was experienced in its smooth, and sometimes not too smooth, operation.

Hydraulic elevators operated on the principal of a box on a stick: the car was propelled upward by a steel shaft attached beneath it. The shaft, or piston, slid into a chamber filled with water, or an oily fluid, which when pressurized moved the piston and attached car up or down as required. The piston had to be long enough to transport the car to the top floor of the building. Its limitations were defined by buildings taller than about twenty floors. Further disadvantages of this system included frozen water pipes, occasional flooded cellars, the continual chore of packing and greasing the piston, leaking valves or cylinders and corroded pipes. Above-average weight inside the passenger car could bring the car down. Occasionally the passenger car crept away from its landing forcing riders to step up or down to their desired floor.

The early electric elevator proved some decisive advantages over the steam-driven and hydraulic passenger elevators. They were prompt and easy to start, were smooth running, provided a quick and smooth stop, and required minimum attention by the building staff. Electric elevators had few moving and wearing parts - comparatively, their speed was uniform at all loads, and they featured minimum operating expense due to simplicity of operation. Safety features and reliability of the electric-operated elevator also boded well with building owners. Unfortunately, the electric elevator emerged much later in 1887.

Only by the 1890's were formulas devised to correlate a building's population with the number of elevators required to serve that population. Elevator car size, speed, and the placement of elevator shaft ways within the structure evolved to that of a science - but only later. Educated guesswork guided much of the development of the elevator's infancy. A new industry and science emerged from what was once, essentially, a tiny room for people that went up and down.

Jayne Building

Philadelphia

William L. Johnston, Philadelphia

Thomas Ustick Walter, Philadelphia

1850

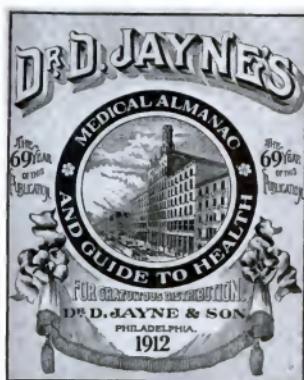
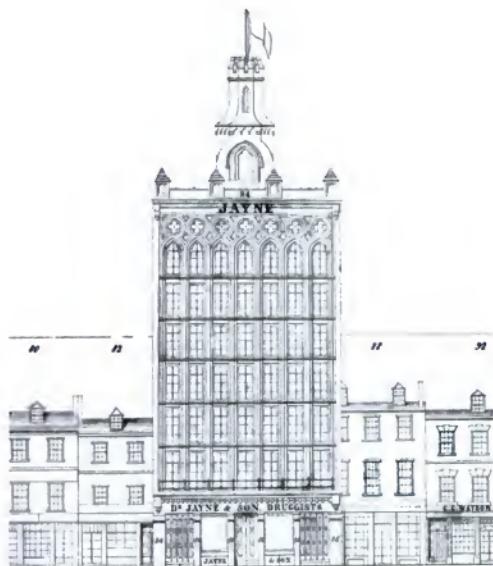
This odyssey begins here. For the first time in this country a building was constructed *tall*. Here was not a church, a monument, a lighthouse, a mill, or a domed public building. With *this* building the *notion of height* was employed not to honor the dead or to impress the living but as a response to a need, a fundamental requirement of commerce. Never before in America was there a ten-story building and it can safely be recorded that, until then, none topped five. The Jayne Building was indeed a remarkable *idea* that coalesced in the minds of a few men before any ink was applied to linen. It was, before anything, a guarded notion, the conception of a building so tall that forevermore architectural history will, or should, routinely include the name "Jayne."

This Philadelphian trailblazer, this "first" skyscraper, possessed the duality of spirit and altitude. Here was not the product of confused thinking, of a misplaced hierarchy or a design by whim, but of a singular thought - an idea that became manifest. Here was an expression of a unified whole, not a composition of discordant parts that recalled the "horizontal" buildings of lesser men. Here was no shallow exercise. The Jayne Building embodied the *idea of height*, not as an afterthought, but as the principal reason for its existence. In the parlance of Louis Kahn, it was tall *because it wanted to be*. Here, in this tall building, was headquartered Dr. D. Jayne & Sons.

David Jayne was born in Monroe County, Pennsylvania on July 22nd, 1799. He was the son of Ebenezer Jayne, a Baptist minister, and Mary DeWitt, Ebenezer's second wife. At the age of nineteen, David Jayne enrolled at the University of Pennsylvania in Philadelphia. There he studied medicine and it was from there he graduated with a medical degree. Dr. David Jayne began his practice in 1822 in Cumberland County, Pennsylvania, and later in Salem County, New Jersey. In 1831 Jayne produced and began to market a line of balsams and liniments and by 1836, the good doctor relocated to Philadelphia. He purchased a drug store at Twenty South Third Street from which he continued his medical practice and from which he increased the production and dispersal of his now-famous salves by an ingenious method.



(16) Philadelphia's Jayne Building is replete with architectural flourishes, devices that celebrate its great height. The Athenaeum of Philadelphia



(17) Architect William L. Johnston recorded the image of the Jayne Building in brown ink. One can only surmise that the public was fascinated with the concept of such a tall building; It was taller than tall and towering giraffe-like over Philadelphia. Source: Rae, Julio H. Rae's *Philadelphia Pictorial Directory & Panoramic Adviser*. (Philadelphia: Julio H. Rae, 1851), p. Plate 3, South Side. The Athenaeum of Philadelphia.

(18) The centerpiece of the cover and the company's pride was its symbolic skyscraper, the country's first.

In the early nineteenth century many companies supplied goods to their customers by mail. Buyers, though remote geographically, could obtain a sales catalog or brochure detailing items as diverse as cloth, salt, shoe buckles, hammers, rope, or drugs and elixirs. In 1843 Jayne began producing an almanac, *Dr. D. Jayne's Medical Almanac and Guide to Health*, a monthly catalog of data including, among dozens of topics, the signs of the zodiac, times of solar and lunar eclipses, planetary information, and statistics involving time charts, tide tables, and weights and measures. Interspersed between these were answers on a variety of medical questions involving poisonings, first aid, coughs, colds, and intestinal worms. Of course there were advertisements for Jayne's products promising relief from a host of ailments such as irritations of the intestinal tract, the common cold, and aid from "General Run-down Conditions, Lack of Vitality, Weakness and Loss of Appetite." Throughout the 1840's millions of these almanacs were dispersed free of charge to millions of consumers; the result were millions in sales for Dr. Jayne. The doctor was in – in the money. Now, what Jayne needed was lots of space.

A truly singular entrepreneur, Dr. David Jayne was not the consummate banker, real estate mogul, or industrialist – those who are commonly thought to produce large fortunes and equally large buildings. Jayne was a purveyor of pills and potions, a self-made businessman, a savvy socialite of preparations, formulas, and remedies. He was a medical

man first, a bit of a showman – some might even say a huckster – but he was not a builder.

William L. Johnson (1811-1849) of Philadelphia was a builder. He began his career in the building trades as a "house carpenter" and only later considered himself an "architect." He taught architectural drawing at a local school and was responsible for designing houses, and a modest number of churches and public buildings in Philadelphia. Somehow Dr. David Jayne and architect William L. Johnston crossed paths and this house carpenter / architect emerged from relative obscurity to design the tallest building in America.



(19) Dr. David Jayne This man unwittingly ordered the construction of America's first skyscraper. Source: King, Moses. *Philadelphia and Notable Philadelphians*. (New York: Blanchard Press, Isaac H. Blanchard Co., 1901), 108. The Athenaeum of Philadelphia.

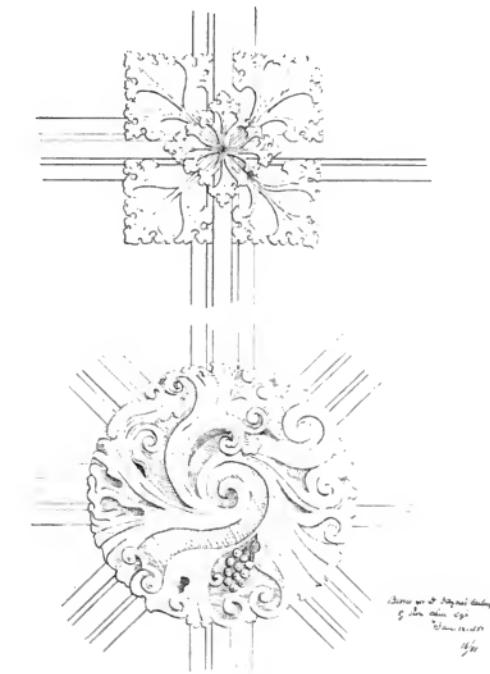
(20) Thomas Ustick Walter has the distinction of having contributed his expertise to two of America's record-holding "tallest skyscrapers" - the Jayne and City Hall – both in Philadelphia. In neither case was Walter the designing architect, but in both his services were substantial; with the Jayne he inherited the role of "supervising architect" and with the Philadelphia City Hall he reported only to the architect of record, John McArthur Jr. serving as "consulting architect." Library of Congress.

It could be argued that Johnston's architectural work, till then, had more to do with the cottages of Andrew Jackson Downing than with large commercial, office, and loft structures. Undoubtedly, though, he was aware of the designs of Alexander Jackson Davis (*Lynnhurst*, 1838), James Renwick Jr. (*Grace Church*, 1843), and Richard Upjohn (*Trinity Church*, 1846) through any number of publications. This period, the 1840's, was the high point of Gothic Revival design in America. To some the Gothic Revival movement defined modernity; it was a reaction against the prevailing Greek and Roman designs of their fathers' generation and that alone gave it credibility. Johnston, quite consciously, embraced the Italian Gothic for his most celebrated commission. For inspiration, he looked to the facades of Venice's Ca' d'Oro and the Palazzo Franchetti, both of which harkened from the 1430's.

A mid-block site at Eighty-four Chestnut Street (later 242-244), near the Delaware River, was chosen for what was originally termed "Jayne's Granite Building." Within months the plans were completed and construction commenced. In October, 1849, after the

building's foundation and first floor were completed, architect Johnston succumbed to tuberculosis and died. Due to this cruel twist of fate Thomas Ustick Walter (1804-1887), one of the most distinguished architects of the nineteenth century, was called to supervise construction and saw to the proper completion of Johnston's conception.²⁰

Architect Johnston's interior designs met Dr. Jayne's programmed requirements. Essential spaces for the treatment of the ill were neatly tucked into the building's lower floors. Included here were a public lobby, patient waiting rooms, offices and consulting rooms; Accounting offices, laboratories, shipping offices, warehousing and loft spaces filled the bulk of the upper floors. Patients harboring all sorts of maladies visited. Sickesses were diagnosed and medicines dispensed in high-ceiling, wood floor rooms lighted with oil lamps. Outside, the upper walls were painted: Jayne Drugs, Chemicals, Paints, Oils, Dyes, Perfumery. Above the heavy cornice were anchored tin-fashioned mortars and pestles, symbols of the druggist profession. Philadelphia's newest and tallest building cost the princely sum of one-half million dollars and the public was amazed. Its *height* was what people spoke of.



(21) These original designs by the hand of architect William L. Johnston were done in the manner of the English Gothic. They were executed in brown pencil on paper, were labeled "Boses [sic] for D. Jayne's ceiling," and were dated January 14, 1851. A boss is a carved block ornament placed at the intersection of the ribs of a vaulted ceiling. Source: Boses [sic] for Dr. Jayne's Ceiling. Thomas Ustick Walter, January 14, 1851. Thomas Ustick Walter Collection, The Athenaeum of Philadelphia.



(22) The curtain wall façade of the Jayne Building reveals a rational grid and Venetian precedent. Library of Congress.



(23) This is the Jayne Building in the last throes of its demolition. Library of Congress.

Officially, the Jayne Building stood ten stories (including its two-story tower), 130 feet tall. The main block of eight stories stood ninety-eight feet. The building occupied the entire site afforded it, a forty-two-foot frontage on Chestnut Street by a depth of 137 feet. It was fitted with two basements. The Jayne Building was not a building composed of eight distinct concoctions plopped one upon another until topped by a flag pole. This was one unit, a tall triumph, a tall *American* composition. Unlike any contemporary, it stood from top to bottom without a single dissenting line. The Jayne was a load-bearing, stone-walled structure, a simple artistic expression. From an engineering perspective the Jayne Building broke no new ground, advanced no new theories. It was famous because of its *height*.

The new structure was of *cage construction*, the precursor to complete metal frame and curtain wall construction. Sidewalls were load bearing, constructed of brick, and varied from eighteen to twenty-six inches thick. Floors were supported by 144 *iron columns* that ran near the center of each story. Iron saddles were affixed atop each column connecting, and helping to carry, the substantial wood girders whose other ends were fixed into pockets of the masonry sidewalls. Of course the wood girders supported wood floor joists and hardwood sub-floors, the latter of which were plastered for *fire protection*. Finish flooring was installed above. Each story, if divided at all, was partitioned only by common stud walls – not by thick masonry support walls. The advantage of uncluttered open spaces was maximized.

Originally the Jayne Building featured no passenger elevators. Two mechanical hoists were used to help move stock and deliver merchandise and other material throughout the building. If employees did avail themselves of an occasional ride it does not rank these "hoists" passenger elevators in the conventional sense. At any rate, there existed two hoists, which slid through two shaft ways, serving all eight floors and the basements.

The Jayne Building's main facade, a lesson in symmetry, was composed of white-gray Quincy granite and plate glass. The street facade was "opened up"; it was designed for large, light emitting windows and its glass content was calculated at being well over fifty-percent of the building's front façade. Floors two through six had rectangular windows, originally all casements. The seventh floor was fitted with Gothic-arch windows and the eighth had quatrefoil types of fixed panes. In all, 205 multi-paned windows were installed in the eight-story block – that is before the side additions.

The stone, shipped from a quarry in Quincy, Massachusetts, was skillfully cut and carefully positioned onto the facade. Spandrel panels and windows were deeply inset; their functions were secondary to the gleaming white piers that stressed verticality, and height. These delicate granite clustered shafts offered an arresting image – clean unbroken piers that let the eye race from bottom to top amply rewarding the spectator with a flourish of Venetian Gothic decoration. Here, at the eighth floor, the viewer was confronted by an echo of the distant past, a recollection of Venice's Doge's Palace, the romance of the Quattrocento. This Gothic "crown" was not borrowed, it was encumbered, embraced as a symbol of a majestic, wealthy, and sea-faring city of canals, of water-lapped buildings, of sea-spiced air.

For many, the grandest part of the Jayne Building was the two-story, wood-framed, tower positioned on top. Its integration with the building proper was somewhat indelicate; after all, the discordance of a granite and glass "palazzo" below with a tin-sheathed wood bartizan above poses the question of whether its inclusion was necessary. That answer is shrouded in time. But nonetheless, it was popular; the eight-sided, Gothic tower served as a public observatory (probably America's first such) especially frequented by Dr. Jayne's guests and patients - and accessible only by steps. It undoubtedly was spell-binding to see Philadelphia from so high an eerie. There were taller church steeples but nowhere a hotel, a loft, a commercial office building.

Because of growing business and the need for even greater space, Dr. David Jayne saw fit to expand his operations further, laterally not vertically. When the main structure was completed, Georgian and Federal style commercial and residential structures, all three stories high, flanked it. Again, Jayne summoned architect Thomas Ustick Walter to deliver plans. In 1851, two wings were erected bracketing the original. These appendages rose six stories each and were designed complementary to Johnson's original.

On March 5, 1866 Dr. David Jayne died of pneumonia leaving the business he founded to relatives. Tragedy struck again on March 4, 1872. A fire of unknown origin began in the upper floors of the Jayne Building doing considerable damage. One of the casualties of the fire was the observatory tower. The building's signature amusement, for many, was lost forever. The main structure was carefully restored, without the tower, and in the process it did receive one, steam-driven, passenger elevator.

Visionaries usually mean well, and in the 1950's some Philadelphians called for a building campus, of sorts, to be titled the Independence National Historic Park. This Park,

they said, would be a fitting tribute to the country and to its founders, and it would include abundant "green space" and an extraordinary collection of famous buildings dating from the revolutionary period. These noted buildings were within close proximity, hence the "campus" concept. Park proponents could see no reason why a century-old, soot-covered, loft building once belonging to a long-forgotten doctor was worth protecting, saving for posterity. And so, it was not. In 1958 the Jayne Building was pulled down. It was demolished with the memories of the sick and the well, the memories of the children, the memories of the clergy, those of the plague victims, the lame, the hopeful, the terminal, the misty memories of the Civil War veterans, and the memories of those who climbed to the top of a building that was once higher than any other in America. An extant Jayne Building would have been more fitting for historic purposes, along with the scores of like structures also demolished, than the park that currently exists with its ample lawns.

Tower Hall

Philadelphia

Samuel Sloan, Philadelphia

1855

Philadelphia's Tower Hall was a curious architectural achievement, a daring opus poised in an America of humble beginnings and lofty aspirations. Antebellum Philadelphia sported many fine buildings in the predominant Greek Revival and neo-Gothic styles, but few were as noteworthy as the Norman-styled Tower Hall. Here was a romantic structure inspired by the English countryside and the age of chivalry; haunting paintings of derelict castles and baronial country manors were produced in the early nineteenth century introducing Norman architecture to Americans. Some architects responded, too, and produced buildings that recalled those of the "mother country," and by doing so, celebrated for America a past it never had.

It could be argued that Tower Hall, its architectural language harkening from six centuries before, possessed some decidedly "modern" aspects. Its street facade was largely of glass. Tower Hall's exceptional height coupled with its clearly delineated piers, spandrels, and an honest treatment of all visible structural components clearly ranked this in the forefront of architectural discourse. Besides, this seven-story structure boasted habitable space higher than all others except Philadelphia's other seminal skyscraper, the ten-story Jayne Building of 1850.²¹



(24) Philadelphia's Tower Hall. EaselWeasel, Evanston, Illinois.

After completion this tall structure was referred to as Bennett's Tower Hall Clothing Bazaar. Entrepreneur and self-made millionaire Joseph M. Bennett (b.1816) commissioned this building in May 1855 and financed the building of this commercial landmark once located at 518 Market Street. As the building's title might suggest Bennett was owner of a large, and largely successful, clothing business. In his "little" brick and stone skyscraper Bennett located floors devoted to retailing, clothing manufacture, storage, and office space. A grandiose first floor was devoted to sales and its function was translated to the exterior. Large glass doors, and even larger glass windows, allowed for the display of merchandise to passersby; The building's location was in the heart of Philadelphia's commercial and millenary district - a favorite destination especially of women.

The focal point of the composition included a telescoping tower that topped the five-story building block. Architect Samuel Sloan's bauble or "folly" delighted Bennett and intrigued Philadelphians. Emerging from a square battlemented base was an eight-sided observatory that indeed "scraped the sky."²²

It was reported that there were no interior columns or fixed partitions inside the building – on any floor – and furthermore that the Tower Hall possessed a metal skeleton.²³ If accurately reported, Tower Hall figures prominently as a quite early and very mature example of a skyscraper. It can only be assumed that the Tower Hall did have some form

of freight elevator service; it *did not* have passenger elevator service at its completion.²⁴ That service might have been provided at a later date. Despite its notoriety, the Tower Hall was demolished in 1951 during a period when few Americans valued the architecture produced by earlier generations. For Philadelphia, this demolition was a shameful act that left the city poorer for it.

Architect Samuel Sloan (1815-1884), designer of the Tower Hall was one of the leading and most prolific architects in Philadelphia. Sloan, born in Chester County, Pennsylvania, began his career as a carpenter and house builder, and in the mid-1830's he settled in Philadelphia. Throughout his professional life he formed business partnerships with John Stewart, Addison Hutton, Charles Balderston and Isaiah B. Young. Sloan wrote many articles and books about architecture with special focus on the American house. His repertoire of completed projects span the years 1851 to 1884, and it is for the long demolished Tower Hall that he is most remembered.

Commercial Hotel

New York City

architect unknown

c.1855

The Commercial Hotel once stood only two blocks from Washington Square, the heart of Greenwich Village. This hotel rose five floors and was most probably faced in either granite or marble. From a design standpoint the Commercial's facades were simple, there was little in the way of architectural contrivances although it was topped by a decorative cornice. By the 1870's there were dozens of hotels just like the Commercial in Manhattan. They clustered around the train depots and near the many ferry terminals that hugged the water's edge of lower Manhattan. These hotels mainly catered to men involved in commerce and travel.



(25) The Commercial Hotel celebrated uniformity, windows were row by rank in the best of the modernist tradition of the *twentieth century*.

An advertising trade card of the day boasted the following:

The Commercial has been thoroughly renovated, new and richly furnished throughout. Situated in one of the pleasantest [sic] portions of the city, distant [sic] from Washington Square 100 yards and from Union Square 500 yards. Within easy access of all the Depots, Ferries and Places of Amusement. The Restaurant will be found to contain the best the market affords including all delicacies in season. A first class Cafe, Billiard Hall, Barber Shop, Cigar and News Stands are connected with the Hotel, as well as Cloak Room, where parties shopping can have parcels checked free of cost.

Hotels like the Commercial were precursors to the skyscraper hotels that will soon rise in every major American city. Before long many will rise hundreds of feet and have a small footprint, just the opposite of the pioneer hotels of the 1850's and 1860's.

Fifth Avenue Hotel

New York City

William Washburn and Griffith Thomas, New York City

1859



(26) The Fifth Avenue Hotel, a flat-topped rarity.

The Fifth Avenue Hotel was not known for its outstanding architecture or remarkable height, although its "modern Italian" interpretation and its six stories did make it one of the more noteworthy and tallest antebellum hotels anywhere. What demands that we remember this building is that it was constructed housing *the first passenger elevator in any hotel building in America*. And that was a pivotal achievement in the history of the skyscraper.

The one passenger elevator installed in the Fifth Avenue Hotel was what was termed a screw elevator, an experimental "perpendicular railway." Invented by Bostonian Otis Tufts, this elevator was propelled upward by a huge rotating screw that ran the length of the shaft, passing through the middle of the car. Not surprisingly, this elevator type passed into history early and the Fifth Avenue Hotel's was replaced in 1875. Guests (the hotel's capacity was 800) and hotel management complained that it was expensive to operate, slow, and awkward.

The Fifth Avenue Hotel was officially opened on August 23, 1859. Described as the most

modern and luxurious hotel in Manhattan, the marble-faced Fifth Avenue Hotel boasted a grand entrance hall that measured twenty-seven feet wide and 160 feet long. Hotel rooms were elaborately appointed and guests were expeditiously catered to. Management advertised that there was a fireplace in every bedroom, that there were many private bathrooms, and that the hotel had many lavishly decorated public rooms. Despite being the preeminent social and political bastion of the city, it was demolished in 1908.

Grand Hotel

New York City

Henry Engelbert, New York City

1868



(27) Grand Hotel

Completed shortly after the end of the Civil War, the Grand Hotel remains as one of America's extant pioneering skyscrapers. The Grand rises seven floors, 121 feet tall and was designed in a modern French mode. A prominent mansard roof employing concave, convex and straight variations wraps its top floor. Exterior surfaces are of white marble and are treated with much Parisian-influenced detailing.

Originally, the Grand's first floor street walls were of cast-iron and have disappeared long ago. The rent-paying merchants who crowded into this neighborhood on Broadway and Thirty-First Street preferred large plate glass windows, and the Grand Hotel accommodated them. Business was brisk and the Grand Hotel stood in the center of one of the

world's greatest retailing centers. Upon opening this landmark building housed one of New York City's first electric-powered passenger elevators, again an accommodating gesture.

First National Bank of Pittsburgh

Pittsburgh

Architect unknown

c.1870

The First National Bank of Pittsburgh was incorporated in 1852, by, among others, James Laughlin and B.F. Jones, two industrialists who later went on to found the giant Jones & Laughlin Steel Company (as one of America's largest manufacturing concerns, Jones & Laughlin had erected for itself a 12-story office building on nearby Ross Street in 1908). By 1873, the First National Bank of Pittsburgh's annual deposits amounted to roughly two million dollars, a considerable fortune in those days. This Pittsburgh institution chose to erect for itself a prominent headquarters building some five years after the end of the Civil War. The result was one of downtown Pittsburgh's most prominent office buildings, and it once stood on the corner of Fifth Avenue and Wood Street.

This important structure was completed as a French Second Empire office building. It originally rose four floors and had an attic floor tucked into its ornamental mansard roof. By all accounts the First National Bank's exterior walls were of cast iron and were designed in the very best manner of the day. Its elevations were elaborate and they donned balustrades, oversized urns, and delicate window trimmings. Further dignity was achieved by the employ of segmental arched windows with keystones, statuary, and engaged Corinthian columns.

The building's design recalls the work of certain architects who adeptly worked with cast iron facades in New York City, specifically the architect builders Slade and Duckworth.²⁵ Both worked in Manhattan's Cast Iron District designing neo-Renaissance and Second Empire facades for commercial and office concerns and may have contributed to the completion of this featured building. Pittsburgh's premier contribution to this architectural genre was the First National Bank Building.

Due to a fire that occurred around 1885, the mansard roof was removed, the fifth floor attic level became a full office floor, and two more stories were added bringing the building's height to seven floors. Much ornamentation was also erased, ostensibly to give the building a more "modern" appearance. The accompanying view of the bank, dating from the turn-of-the-century, shows the result of these alterations.

By 1908 the First National Bank of Pittsburgh completed a new twenty-four story headquarters building nearby; it was designed by the celebrated Chicago-based architecture firm of D.H. Burnham & Co. The original headquarters building was demolished in 1908.

Broadway Central Hotel

New York City

Henry Engelbert, New York City

1870

What a great French Second Empire building this was! An appropriately scaled mansard roof topped this giant hotel and it featured a convex central pavilion flanked by two

straight mansard corner pavilions. Upper windows were pedimented, street level windows were bright and large and flags fluttered a whopping 197 feet above the sidewalk. This was a great "ship" of an early skyscraper, and when completed it was one of the tallest of Manhattan's hotels.



(28) The Broadway Central Hotel, a post-Civil War extravaganza topped by a giant mansard roof.

The Broadway Central stood in Greenwich Village (Broadway and Third Street) and rose nine floors, 149 feet tall. It was constructed as a load bearing building as might well be expected and its exterior walls were laid up with white marble. Its foot print measured 175 feet along the street and 200 feet deep. Inside, the Broadway Central Hotel housed two passenger elevators that served guests and staff. The hotel contained 650 rooms and was New York City's largest. Considering this was constructed just after the Civil War makes the above superlatives even more impressive.

In its day the Broadway Central was considered one of the hotels of "first class rank." It was known as being comfortable and lavish in its appointments. Inside, the restaurants catered to every whim and they were known of internationally. Perhaps Henry Collins Brown says it best when he wrote in 1920:

Life in these wonderful hotels is as much a source of amusement as any other attraction in New York, and to those to whom it is unfamiliar the indulgence is well worth the cost. It certainly permits a glimpse of cosmopolitan New York at its best, and to many persons is far more interesting than the average theatre.²⁶

Despite its notoriety the grand dame Broadway Central was not very well preserved. Tragedy struck on August 3rd, 1973 when a portion of the brick veneer of the Broadway facade pulled away from the structure beneath and it collapsed into the street killing four people. Afterward the whole of the building was deemed unqualified to stand and it was pulled down shortly thereafter.

Equitable Building

New York City

Gilman and Kendall, New York City

George B. Post, New York City

1870

Until the time of its completion, no American corporate headquarters building was so celebrated as was the Equitable Building. Here, at 120 Broadway, stood a New York City icon that was internationally recognized, a structure known to all cabbies and postmen, to all brokers and bankers. The Equitable was *the first office building anywhere* to have included passenger elevators as an *original feature* of the building's design – a profound achievement. Within architectural circles the building's merits and shortcomings were praised and exposed, but in the final analysis, the Equitable Building was judged a triumph.



(29) The serious and brooding pile of the Equitable Building. Picture History.

46 Joseph J. Korom, Jr.

In 1859, Henry Baldwin Hyde (1834-1899) a native of Catskill, New York, with a group of investors, founded the Equitable Life Assurance Society of the United States. He was business-minded, dedicated, persuasive and served as Equitable's president from 1874 till his death. Throughout the 1860's the company established offices in seven major foreign cities, yet lacked a notable American headquarters building. After operating in a series of lower Manhattan locations, and following years of sustained growth with the resultant increase in staff, Hyde realized that a larger and more permanent home office was needed.

It is doubtful that there was any controversy regarding the new building's design. Two prominent architects were chosen for the task: Edward H. Kendall (1842-1901) and Arthur D. Gilman (1821-1882). Both men were born in Massachusetts, practiced in New York City, and studied architecture in Europe – Kendall at the Ecole des Beaux Arts in Paris.

George B. Post (1837-1913), of New York City, was summoned as a cost consultant, a structural engineer, and as overseer of construction. He would go on to become one of the most prolific and celebrated of America's architects.

In 1868, these four ambitious men, Hyde – then vice president of Equitable, Kendall, Gilman, and Post participated in an orchestrated effort to usher in a new and exciting era of commercial architecture. It was Hyde's foresight to include elevators in the Equitable, and the wedding of the comparatively tall office building with elevators was nothing short of a revolutionary act.

In 1868, drawings were prepared and unveiled to Hyde. The design was an outstanding example of the French Second Empire style. To contemporary observers this design approach appeared somewhat commonplace as post Civil War architects, charged with important commissions, often looked to France for inspiration. Many buildings, designed like that which appeared on the drawings, existed throughout America's large cities. Hyde, too, sought the latest, most fashionable French type, and he enthusiastically sponsored Paris' "new look" for Equitable. Construction of the Equitable Building lasted some two years and cost its sponsor over one million dollars, then a substantial fortune.

The building was completed on May 1st, 1870, and it opened its doors to hundreds of employees and to thousands of the curious. To some visitors the most fascinating aspects of the new building were the two, steam-driven, elevators. Rides were provided, and those who availed themselves of the thrill were no doubt first-timers. Perhaps what most never realized is that their little "journey" had profound ramifications. The inclusion of the elevator into an office building changed architecture forever. Nevermore would the highest floors be shunned – *climbing* six or more floors was eliminated, here. Then, and just for a moment, all floors were equal. Top floors, with breathtaking views, would soon be eagerly sought after – these chosen over those on lower floors.

The building's exterior consisted of Concord gray granite, glass, and iron. It fronted 88 feet on Broadway and 136 feet on Cedar Street. The roof was spiked with multiple chimneys, finials, and iron cresting. The walls were ornamented with swags, pilasters, columns and pediments. Positioned atop the main, or Broadway, entrance was a major allegorical statue group. Popular American sculptor, John Quincy Adams Ward (1830-1910), carved this masterpiece from a single block of Carrara marble. At completion it stood eleven feet high and weighed ten tons.

The Equitable Building rose seven floors, 145 feet above the street, had a partial iron frame, but as a whole, its construction was quite commonplace. Internally, brick partition walls, segmental brick floor arches, wrought iron beams, and granite piers shouldered the loads exerted on this building. The Equitable's brick and stone load bearing walls were massive, with those walls on the first floor being an astonishing eight feet thick, and those at the seventh floor four feet thick.

A first floor arcade, a grand space of pure Victorian splendor, featured two-story-tall Corinthian columns and awesome, ceiling-mounted, stained glass panels. The Equitable Building was lavishly appointed with most details expressed in rare and exotic materials. Contained within the new building were a law library, restaurants, shops, private clubs and dining rooms. Palatial offices for company executives were located on higher floors – along with the private offices of prominent law firms and various corporations.

Housed high within the mansardic pavilion, centered on the Broadway facade, was a sanctuary for Hyde. A higher location did not exist in "his" building, and Hyde knew it. He went so far as to have a locked gate installed at the foot of the stairway leading to his "secret" domain. Furthermore, only a private elevator, installed in the 1880's, accessed Hyde's elaborate offices.

For Equitable's "clerks or servants" employed at the new headquarters, things were not so sanguine. Hyde decreed that: smoking will not be allowed during business hours, tobacco chewing or smoking pipes would not be allowed anywhere in the building, that inkstands will not be cleaned in the wash bowls, that fireplaces shall not be used as cuspidors, and finally that wood, metal, marble or any wall surface will not be defaced. Anyone caught in violation would be dismissed.

Originally there was a weather signal station atop the building – a sailor's guide that utilized colored flags to advise mariners of upcoming weather conditions. The flag pole, positioned atop the building's loftiest pavilion, stood 106 feet high and weighed two and one-half tons. It was from here, too, that whenever an Equitable officer or director would sail to Europe this enormous pole would be temporarily "dipped" in homage as the liner passed in the Hudson River.

Before long, other office buildings crowded around the Equitable making the signaling and "dipping" customs, obsolete.

Between the years 1874 and into the turn-of-the century, the Equitable Building underwent significant and numerous changes. The history of this building is truly Byzantine as it was widened, lengthened and added onto vertically.

During the 1880's Equitable's headquarters grew to nine floors, 172 feet tall and had installed four more *public* elevators to the original two. Horizontal expansion occurred too, and soon the building filled the entire block east to Nassau, and north to south Cedar to Pine Streets. By 1880, the building was lighted electrically, and by 1886, Equitable became *the largest insurer in the world*.

The building, in all of its iterations, served the company well. It was a fixture on lower Broadway, an early skyscraper recognized by millions. Still, tragedy struck. About five-thirty, on the morning of the ninth of January, 1912, the Equitable Building was reported

on fire. It was thought that the blaze began in one of the building's restaurants. Fire quickly engulfed the structure. It was catastrophic for the building, but not for Equitable. Most papers and corporate documents survived, being locked in fireproof safes. The conflagration paved the way for the erection of Equitable's other noted home office building, a 38-story skyscraper designed by Chicagoan Ernest Graham, and completed three years later.

The Equitable Building of 1870 was one of a select genre of American skyscrapers; it was one of the great pioneers of larger and taller urban office buildings. There were comparatively few. Upon its completion, just five years after the Civil War, there was no term for its type; the word "skyscraper", in this context, was still fifteen years in the future. The Equitable housed the first elevators, before electrification, so oil lamps and candles glowed within the cabs. It had massive load-bearing walls, a paradigm of *ancient* engineering. What seems today to be a decidedly feudal custom of "dipping" flags from its tower was here practiced among men of a "modern" era. Was this a castle?

In many ways this object, the Equitable Building, rested on the cusp of the nineteenth and twentieth centuries. The building's architecture ultimately looked back to the Renaissance, to antiquity and it was urged to do so by some of the foremost architects of the time. Despite outward appearances, the inclusion of the passenger elevator negates whatever negative criticism might have arisen about its architecture. The implementation of a self-propelled passenger elevator into a multistoried office building was that profound. This was a modern building.



(30) The Gilsey House Hotel. Picture History.

Gilsey House Hotel

New York City

Stephen Hatch, New York City

1871

Completed only six years after the momentous events at Appomattox Court House, this lofty hotel became an instant sensation. Tall, elegant, and altogether cosmopolitan this Parisian cousin enthralled New Yorkers and visitors alike. It opened on April 15th, 1871 and was the tallest building for some distance around. The Gilsey House Hotel stood seven floors, 125 feet tall and it occupied a site measuring sixty feet along Broadway and 128 feet along 29th Street. Originally the hotel boasted 300 rooms on its upper floors with stores on its first.

Real estate developer Peter Gilsey (1811-1873) channeled his entrepreneurial spirit into this parcel of land as early as 1869 by purchasing a homestead, the last remaining in Midtown. The resulting early skyscraper was designed in the French Second Empire style with facades replete with ornamentation. White-painted cast iron detailing, supplied by the celebrated foundries of Daniel D. Badger, girds the walls. Its architecturally complex facades, rich with solids and voids, freely borrow from classical antiquity: white marble figures prominently on its exterior as do brick chimney towers, iron cresting, and its delightful rooftop clock. The Gilsey still stands as an important city landmark and is currently a luxury cooperative.

Palmer House Hotel

Chicago

John M. Van Osdel, Chicago

1872



(31) Chicago's famous Palmer House Hotel

Potter Palmer (1826-1902) was wealthy, powerful, and further described as "the first

merchant prince of Chicago." He was a real estate baron who, by 1867, controlled the princely sum of \$600,000 worth of property in central Chicago. He had constructed a series of hotels, the second was opened in March 1871. This hotel was no small inn, it stood *eight stories*, had 225 rooms, cost \$200,000 to construct, and was outfitted with some \$100,000 worth of furnishings. It was brick-faced, capped with a three-tiered mansard roof, and it "scraped the sky" in the manner of the tall buildings found in large eastern cities. It existed, it seems, only to be consumed in the Chicago fire of October 1871. Potter was not deterred and planned for its immediate replacement; he called upon the most celebrated architect then in Chicago.

John M. Van Osdel (1811-1891) is considered Chicago's first professional architect. He was born and educated in Baltimore, and at a young age, moved with his parents to New York City. His father, John Van Osdel, was an architect and builder, a profession that young John M. decided was for him. Through his teens he was apprenticed with his father but later, when he was able, Van Osdel moved to the then very young city of Chicago. There was boundless opportunity in a "frontier" place like Chicago and Van Osdel capitalized on it. For over two decades he drew the plans for small and large homes, business blocks, stores, and hotels. He worked in-and-through a variety of styles popular in those years employing Greek or Gothic revival, "modern" French, or the ever-popular Italian. For the last eighteen years of his life, due to bad health, he produced no buildings. Still, he and his work are far from forgotten and he is considered a cultural hero of early Chicago.

In 1871, Van Osdel was approached by none-other than Potter Palmer, businessman extraordinaire, for a large hotel project and what was to become, arguably, Van Osdel's most significant commission. This was an ambitious undertaking. Plans showed a structure that measured 275 feet along State Street – the city's main thoroughfare – , and 300 feet along each Monroe and Wabash streets. An astonishingly rapid construction schedule pushed the building to completion in fourteen months. A gang of some 350 workers toiled until late into the evening by virtue of electric arc lights that flooded the site; how magnificent, how romantic. At completion the Palmer House Hotel was judged one of the finest in the Midwest. It towered nine floors, one-hundred feet above Chicago. Structurally, it was of cage design – a system which employed some brick bearing walls and a partial iron skeleton; six-hundred tons of Belgian iron were used for structural purposes.

The Palmer House boasted a grand rotunda and corridor that measured 106 feet long, sixty-four feet wide, and thirty-six feet tall. The building boasted thirty-four varieties of marble and the installation of a staggering 90,000 square feet of marble flooring. The Hotel's first floor was the home to fifteen retail stores, and above was space for 700 guest rooms. The \$4-million Palmer House was Chicago's first hotel to feature electric lighting, telephones, and passenger elevators – three of them.²⁷ Management claimed the skyscraper was "America's first fireproof hotel."

The French Second Empire-styled Palmer House was topped with the customary mansard roof. This one, though, featured a particularly craggy silhouette defined by many projections such as arched windows, pediments, chimney masses, and a dome with a flagpole. Each street façade featured a central pavilion complete with pediment, stacked two-story-tall Corinthian columns, and some 250 windows. This was Paris on the prairie, caryatids and all.

To some it marked the end of an age, and without much ado, the Palmer House was

slated for demolition. A new, and larger Palmer House would be built, one standing twenty-five stories with 2,000 rooms. The wrecking ball struck in 1925 and the grand old hotel tumbled into a heap of rubble, shards of glass, and thirty-four varieties of marble dust.

Domestic Sewing Machine Building

New York City

Griffith Thomas, New York City

1873

When completed this early skyscraper was hailed as one of the tallest and most beautiful in New York City. It enjoyed instant public recognition and ranked one of the most visited emporiums on Union Square. The building proudly stood at seven floors, 110 feet, the tallest cast-iron fronted building erected.²⁸ It was constructed by the Domestic Sewing Machine Company to house its corporate headquarters on its upper floors; the first floor was reserved as a showcase for the remarkable machines Domestic produced. To further dazzle the public, Domestic's building was outfitted with one passenger elevator and all were beckoned inside to witness both new inventions.

After the Civil War, America's largest corporations derived income from such diverse sources as coal, steel, tobacco, foodstuffs, and among others, sewing machines. Elias Howe, considered the inventor of the *modern* sewing machine, patented his model in 1846. Before the age of innumerable multinational corporations, before the age of the automobile, the airplane, and the telephone, corporations provided consumer goods and services that seem foreign by contemporary standards. Corporate names, once commonly known, disappeared with time, their products no longer required. Some were simply absorbed into other enterprises. The Domestic Sewing Machine Company, now long forgotten, built a corporation on the popularity of the sewing machine, and only twenty-six years after Howe's patenting, a skyscraper rose as a response to his, and *their*, machine's success.



(32) New York's Domestic Sewing Machine Building. Picture History.

(33) Trade cards, like this one advertising the Domestic Sewing Machine, were handed out to potential customers. The Internet was a century into the future.

The Company chose a site on "Ladies Mile," at the southwest corner of Broadway and Fourteenth Street, in Manhattan. Here, established by 1870, was the heart of New York's largest shopping and millenary district, a natural location for a manufacturer of sewing machines. Nearby were many cafes and restaurants that were known to cater to women shoppers. Large department stores displayed the latest fashions and were involved in vigorous competition. The Domestic Sewing Machine Company preferred a building of aggressive design, with great height and much glass—and they got it. The company's site was unexcelled, it was the center of a three-dimensional money matrix.

Responsibility for the design of the Domestic Sewing Machine Building was afforded to Griffith Thomas (1820-1878), a celebrated New York architect who was born and educated in England. Thomas was noted for the engaging cast iron facades that he designed for many commercial and warehouse buildings in Manhattan. So too with the Domestic Sewing Machine Building, a structure that architecturally recalled contemporary Parisian buildings, and in turn, their Baroque antecedents. In September 1872, Griffith Thomas submitted to the City of New York Building Department his plans for the new skyscraper. Within one year, to the delight of the company, the newest and the tallest commercial office building on Union Square stood unrivaled.

The construction of the iron-fronted Domestic Sewing Machine Building was quite conventional for the 1870's. Its interior structure was of brick and timber and it boasted three-foot-thick bearing walls. Construction of its iron facades required that all iron components be bolted together, and the entire building front be laid out on the floor of the foundry's fitting room in Manhattan. All parts were numbered and positioned in their respective locations, as they were to appear on the building, after which a protective paint was applied to retard rust. After the building's structural system of timber and brick was in place, the prefabricated iron "modules" were hauled by horse and wagon to the site for bolting to the underlying structure. This quick assembly process progressed upward from the first through the seventh floors. Afterward, the whole of the facade was painted white to resemble Italian marble. The result was a splendid iron box with much architectural decoration—all of it in iron. Iron's benefits were economic: buildings so fitted were assembled more easily and quickly than conventional structures faced in stone, and periodic maintenance required only a coat of paint.

The Domestic's first floor was wrapped in glass—large windows allowed for natural sunlight to penetrate deeply into the showrooms. The Company's street floor displayed the various sewing machine types, paper dress patterns, and models sporting the latest fashions—all garments of course capable of manufacture by a Domestic machine.

The building was a metaphor for its own large display windows, for it too was on display, there to be examined like the products it hawked. After all, a three-foot tall machine paved the way for a 110-foot tall "machine for commerce." An exterior so lavish was impossible to overlook, even by hurried New York shoppers. Here was an altogether pleasing Victorian-age business building featuring two-story-tall Corinthian columns at its opulent main entrance. High above was a mansard roof peppered with dormer windows. A distinctive rounded tower embraced its seventh floor. The Domestic's facades were glassy indeed, and approximated 75% of its street facades. This once impressive, and somewhat quaint, old skyscraper was demolished in 1927 in order that a nondescript, brick-faced office building replace it. Fashion is fleeting.

Bennett Building

New York City

Arthur D. Gilman, New York City

1873

Still extant on Manhattan's historic Nassau Street is this early but important contribution to the skyscraper art. The Bennett was originally constructed as an office and loft building that stood seven floors, ninety-eight feet tall; originally it was crowned by a substantial mansard roof. Its notoriety is derived from its claim to be the tallest cast-iron fronted building ever erected—but only after a later renovation. This landmark occupies a vast parcel, 118 feet on Nassau, by seventy-eight feet on Fulton, and seventy-five feet on Ann Street; it is a large metal palazzo with animated walls standing as an excellent specimen of modular metal-wall construction.

The Bennett Building was both a speculative real estate investment, and a personal memorial - each conceived in the mind of James Gordon Bennett, Jr. (1841-1918). Within a year of his father's death, and in honor of his father, James Jr. commissioned this "memorial." Scottish-born James Gordon Bennett, Sr. (1795-1872) was the celebrated writer, newspaper publisher, and editor of the *New York Herald*. Upon retirement in 1867, he turned over the reigns of the *Herald* to his son, and his son remembered the favor in 1873. The result was a skyscraper executed in the French Second Empire style that was painted white to resemble the finest marble.



(34) Lower Manhattan's Bennett Building Photo by author.

Structurally the Bennett Building stands by means of cast iron beams socketed into load bearing brick walls with support provided by iron tie rods. Attached to the structure, row

by rank, were cast iron, foundry produced, wall modules complete with attached decoration and an opening for large sash windows. Its idiosyncratic, segmental window arches add an element of whimsy to this all-too-serious building. Sliding through the Bennett and serving all seven rentable floors were two Tufts-manufactured steam-driven elevators.

In 1889, and at the behest of a new owner, the Bennett's mansard roof was removed and three floors were added. Then standing ten floors, 154 feet, the Bennett was ranked the tallest cast-iron fronted building. Fortunately, the original modules were replicated and the addition was seamless. Vertical transportation changed too and included more "modern" *hydraulic* elevators, these generally thought to be swifter for all ten floors and more dependable than the steam-driven. The New York architect James M. Farnsworth oversaw these changes.

The Bennett Building remains much as it did in the nineteenth century, its rounded corner window bays as beguiling as ever. It says more about the twentieth century than it does about the nineteenth – it is a forward-looking skyscraper, a bold, restrained experiment that eschews much Victorian fussiness for simple geometrics. The Bennett Building is a remarkable early skyscraper of refined design possessing exterior walls of modular construction, facades of approximately fifty-percent glass, and walls that rise sheer from sidewalk to roof.

Reaper Block

Chicago

John M. Van Osdel, Chicago
1873

The Reaper Block was one of only a handful of Chicago's very large, post-fire, mansardic monuments. It was constructed as investment property by Cyrus Hall McCormick (1809-1884), one of Illinois' wealthiest citizens and the founder of the McCormick Reaper Works, (later *Company*). This was the parent firm of what was to become International Harvester, the behemoth of its industry. The building's name references those machines for *reaping* grain, an especially meaningful moniker in the agricultural Midwest and in Chicago, the grain capital of the world. It is from buildings like these that, height, natural light and view were realized as marketable commodities. For Chicago in the early 1870's this office building was seen as lofty, it was visible at various distances throughout the city and from its top floor, or roof, one could peer out and over hundreds of rooftops and see the distant horizon line of Lake Michigan. From its opening day upper-floor access was provided by one passenger elevator.



(35) Chicago's Reaper Block was completed only two years after the city had sufficiently cooled.
Stereoscopic Views of Chicago and Vicinity, Copelin & Son, Photographers, 214 West Washington Street,
Chicago, c.1875.

As one of Chicago's earliest skyscrapers, the stone-fronted Reaper Block aroused much interest from businessmen, politicians, and the citizenry at large. Its was located on the northeast corner of Clark and Washington Streets, fronting ninety feet and seventy-five feet respectively. Its construction cost was tagged at \$200,000. The Reaper Block featured two entrances, it stood six floors - three more were added later - and it originally rose sixty-five feet.

The first floor was reserved for retail and was occupied by six stores and a lobby. Above were eighty offices that were rented to various businesses. This major office block was described long-ago as being "occupied by a desirable class of tenants, on account of its nearness to the courts." This Parisian pile was demolished in the early 1950's.

Staats-Zeitung Building

New York City

William Schickel, New York City

1873



(36) The Staats-Zeitung Building was the home to a Manhattan-based German newspaper.

In 1834, a weekly newspaper entitled the New York *Staats-Zeitung* was founded in New York City. Translated literally as the *state newspaper*, it was the favorite of countless newly arrived German immigrants, as well as those established German citizens and reputable businessmen of the great entrepreneurial city. As one might surmise, architect William Schickel (1850-1907) was German-born and studied his craft in Europe. In America, Schickel served as draftsman in the New York office of the celebrated architect Richard Morris Hunt.

This German newspaper building rose five stories, and it was topped with a mansard roof.²⁹ It stood on Printing House Square, on the block bounded by Park Row, Centre, and Duane Streets in the heart of Manhattan's newspaper and printing neighborhood. At the time of this building's completion the newspaper's circulation approximated fifty thousand copies per week. The *Staats-Zeitung* Building was demolished in 1907 in order to make way for New York City's thirty-four-story Municipal Building (McKim, Mead, & White, 1914). The following may be considered its obituary, including the questionable hyperbole:

The *Staats-Zeitung* is the biggest and most important of the buildings in the district. When built it was the tallest and widest building in New York City constructed by a private concern, and its outlines were considered beautiful. For a long time it was one of the show places of the town.³⁰

Chapter Two

Continued Experimentation

1875-1889

Financial Districts Form: Wall Street Reigns

Shortly after the Civil War America's cities began to mature physically and economically. Transportation modes evolved, neighborhoods coalesced, and buildings grew larger and taller. In short, centers of financial power emerged across the land. America's largest cities developed "downtowns" and within each were micro-business zones – certain businesses grouped for economic advantage. Boston, with its cow-path street patterns, could point to Devonshire and Milk streets as its business nexus. St. Louis had Olive and Seventh streets, Detroit, Milwaukee, Cincinnati, and San Francisco had Griswold, Water, Vine, and Montgomery.

Chicago claimed LaSalle Street, "the wealth generator of the prairie." But there was one financial neighborhood that was *the* powerhouse, that was *the* business center of business centers, and that place was New York's Wall Street.

In 1884 the following observation was penned about Wall Street:

Nowhere else in America are there such and so many magnificent buildings as in this section of the city. The streets are narrow, and overshadowed as they are by edifices six or more stories in height, seem to be dwarfed into mere alley-ways. Nearly every building is worthy of being called a temple or palace. White marble and brown stone, with every style of architecture, abound. The United States Sub-Treasury Building, at the corner of Wall and Nassau streets, is a stately white marble structure in the Doric style, occupying the site of the old Federal Hall, in which Washington delivered his first inaugural address. Opposite is the

white marble palace, in the style of the Renaissance, known as the Drexel Building. A little further down the street, at the corner of William, is the United States Custom House, formerly the Merchants' Exchange, built of granite. It has a portico supported by twelve massive columns, and its rotunda in the interior is supported by eight columns of Italian marble, the Corinthian capitals of which were carved in Italy. Opposite this building is the handsome structure of the Bank of New York. Banks, and bankers' and brokers' offices fill the street, and are crowded into the side streets.³¹



(37) The epicenter of New York's financial district was, and remains, the corner of Wall and Broad Streets. The prow of the House of Morgan parted the waters of economic uncertainty and parted some from their funds.

Even early on, in the 1830's, Manhattan was crowned America's banking center. By 1846 there were twenty-five banks in New York with thirteen headquartered on Wall Street, and two each on nearby Pearl and Greenwich. In 1876 Wall Street could claim fifteen banks lining its sidewalks; fifty-five others had offices elsewhere in Manhattan. Within a few blocks of Wall Street were headquartered the New York Stock Exchange, Produce Exchange, Cotton Exchange, Corn Exchange, Mercantile Exchange (Butter and Cheese Exchange), Cocoa, Coffee, and Tea Exchange, Coal and Iron Exchange, and the Consolidated Stock and Petroleum Exchange. Surrounding these, were headquartered multiple insurance companies, brokerages, and law firms.

Wall Street (stretching only six blocks and measuring a scant thirty feet) wide was the core of this economic powerhouse. Most of the buildings that fronted on Wall Street during the 1870's and 1880's were solid stone-fronted structures dripping with Greek and Roman allegory. They were heavy and substantial, mostly of stone and visually intimidating. The majority was five and six stories high and they displayed a variety of columns and arches. New York's financial district was crisscrossed by tiny and romantic-sounding thoroughfares like Gold, Pearl, Beaver, Thames, Bridge, and Marketfield streets. Exchange Place, just south of Wall, was destined to be "the narrowest man-made canyon" as it was only fifteen feet wide and lined with business buildings; by the 1930's it would be hemmed by some of the tallest skyscrapers on Earth.

In 1880 the population of Manhattan was 1,164,673. The daytime population of Manhattan's financial district was estimated then to be some 400,000 souls (more than in almost every U.S. city). Certainly not all of those working on "the Street" were brokers and bankers as clerks, tellers, custodians, delivery boys, cabbies, messengers, and cigar merchants were also present. Jockeying for position, too, were corporate titans and their boards. The headquarters of large companies required substantial office space and demanded to be where the action was, the financial action. By 1885 the Wall Street area was home to many large national and international concerns; it was declared that coal was king, steel was king, the railroad was king, real estate was king...there were many kings.

Wall Street was in a supreme and enviable position. The centers of Chicago, Boston, and Philadelphia were high density indeed but they were not built with the *intensity* of the Wall Street corridor. Furthermore, they lacked the international qualities of "the Street." In New York globally positioned banks and syndicates vied for office space with French importers, London-based law firms, Italian olive oil importers, Dutch venture capitalists, and Scottish shipping companies. Two major rivers and an ocean lapped against the sea walls that defined New York's financial district and allowed it to lay claim to the title of "world's largest and busiest port." Whether "the Street" knew it or not, each skyscraper erected during the 1870's and 1880's was simply preparatory to its development later as the greatest, most powerful financial neighborhood on the globe. Here, too, would be the densest and tallest concentration of skyscrapers anywhere.

Contemporary writers mused about the Wall Street district and of the celebrity of the men who inhabited it:

Aside from its fame as the greatest of all financial centres, the street derives piquancy and zest from the thrills and excitement of meeting face to face most of the men whose names are familiar to the reading public. All the great captains of industry; the capitalists whose everyday move is recorded by the press; distinguished visitors from foreign countries; railroad presidents, various dignitaries in the shape of steel kings, rubber kings, sugar kings, oil kings and lesser members of the royal families of commerce and manufacture may all be seen here. The comings and goings of J.P. Morgan are always moments of delightful excitement to the visitor and something to speak about when he gets back home. Mr. Morgan's photograph is so frequently printed that he is easily recognized. The same is true of Mr. Rockefeller. With these two exceptions, most of the big men, though well known by name to the average reader, cannot very well be identified from the occasional portraits that appear. Business, however, brings them constantly on the street, and they are everywhere in evidence.³²

Firms jockeyed for position in the marketplace and for geographic prominence in the Wall Street district. And they were willing to pay for the privilege-sometimes dearly. At the completion of the Bennett Building in 1873 *The Herald* newspaper stated the Bennett's yearly rent roll at \$125,000. Businesses there paid annual rents of \$22,500 for the ground floor, \$40,000 for the first floor, \$20,000 for the second, \$15,000 for the third, \$12,500 for the fourth, \$10,000 for the fifth, and \$5,000 for the sixth. Of course all floors were accessible by passenger elevator-a democratizing feature-still the upper floors seemed not yet to be as valued despite the stunning views they offered. This situation would change.



(38) A large corner office with ample sunlight was the reward for hard work.

The traditional occupiers of high-rent Wall Street skyscrapers were banks, insurance companies, law firms, brokerages, advertising and marketing professionals, bulk shippers, railroads, passenger steam ship lines, communication firms, publishers, newspaperers, and various other privately-held corporations. Between 1875 and 1889 thirty-six skyscrapers, ranging in height from seven to fourteen floors, were erected in the Wall Street financial district alone; more were completed in Union Square, Madison Square and throughout the briskly developing midtown. Within just a few blocks of Wall Street, 125 insurance companies were either headquartered or maintained substantial offices.³³ The Wall Street neighborhood hummed with actuaries, secretaries, and attorneys who were employed at domestic and foreign-based fire insurance companies, life insurance, and "plate-glass" insurance companies. The grouping of like financial industries and the coalescing of wholesalers and retailers was financially desirable. Personal contact was vital and so too the handshake. The consummation of a deal over lunch at Delmonico's, or the partaking of a mug at a tavern wedged between columned and soot-dusted buildings, was a ritual not to be deviated from.

In the summer of 1876 America was observing the nation's centennial and simultaneously carrying out a military campaign against the Kiowas, Comanches, and the Sioux. When, in the summer of 1876, New York celebrated the completion of the world's tallest skyscraper, the Tribune Building, Colonel George Armstrong Custer was being surprised – and for the last time. In 1882 the Montauk Block became the talk of Chicago, while also in 1882 a bullet entered the skull of Jesse James, an event that quickly became the talk of St. Joseph. Such was the "wild west." New York then boasted a symphony orchestra, multiple opera companies, abundant legitimate theater, schools, libraries, museums and was completing the world's longest suspension bridge, a steel and stone masterpiece that would forever connect New York to Brooklyn. By the 1880's gas was laid-on in almost every business structure in lower Manhattan and its workers were coat-buttoned, booted, and felt-hat-topped gents who rode in tat-tat-tat-sounding wagons pulled by clip-clopping horses. Elevated railways clamored above while freight train whistles and the melodious groans of packed ferries wafted lazily between the business blocks. Such was this skyscraper center.



(39) Office workers before the age of metal desks, fluorescent lighting, and central air conditioning.

On September 4th, 1882, Thomas Edison's electrical station at 257 Pearl Street in lower Manhattan began supplying electricity to customers. Within an area bounded by Wall, Spruce, Nassau, and Pearl streets companies saw light bulbs blink on. New York skyscrapers and streets were the first to be electrically lighted – anywhere. Its implication was profound and the "modern" office building was a step closer to reality. One of the first buildings to benefit from the new invention was the five-story Times Block (Thomas R. Jackson, 1857) that stood on Park Row. The New York Times reported the following:

Yesterday for the first time The Times Building was illuminated by electricity...To each of the gas fixtures in the establishment a bronze arm was attached, and the electric lamps were suspended from the ends of these arms...The light was more brilliant than gas, and a hundred times steadier. To turn on the light nothing is required but to turn on the thumbscrew...As soon as it is dark enough to need artificial light you turn the thumbscrew and the light is there, with no nauseous smell, no flicker and no glare.³⁴

This was a staggering commercial advantage gifted to New York by the "Wizard of Menlo Park." Before the decade was out more businesses would locate in lower Manhattan while others would remain and expand there. Buildings could now be electrified and soon skyscrapers would be stuffed with devices that would revolutionize the office. Within a few months another two thousand lights in additional structures nearby would also be turned-on. Though nowhere near Wall Street, the world's first electric operated elevator was installed by Otis Brothers in the five-story Demarest Carriage Company Building (Renwick, Aspinwall & Russell, 1889) located on Fifth Avenue at Thirty-third Street, in mid-town Manhattan. The stage was set for further experimentation.

By 1880, America's downtowns became defined by the tall building. As time passed, the downtown skyscraper would come to fulfill multiple roles as space was leased to retailers, restaurateurs, entrepreneurs, and space hungry corporations. The skyscraper was

embraced as the unmistakable icon of the "city center," the very symbol of urbanity and sophistication, of technology and progress.

Iron and Steel



(40) A construction icon and potent symbol of the skyscraper – the steel column complete with rivets.

High strength steel is an indispensable commodity for the skyscraper of today. But early skyscrapers were constructed using basically three methods, three philosophic approaches to ensuring that the tall building stood up: 1) traditional load bearing construction, 2) cage construction, and 3) skeleton construction. Additionally, hybrids of these three families were also employed, and in part some early skyscrapers stood by means of varying degrees of each *simultaneously*. The skyscraper's sub-structure, that which is below the sidewalk, and the skyscraper's super-structure, that which exists above the sidewalk, must work in tandem to make the building whole until it is pulled down. Regarding all buildings there is only one dictum: structure is the means by which all building forces are conducted to the ground. These forces include gravity (a downward pull which includes a building's "live" and "dead" loads), and the lateral force (pressures of wind and the movement of earth). A skyscraper's building forces may be strong and unrelenting but they are manageable.

Load Bearing Construction

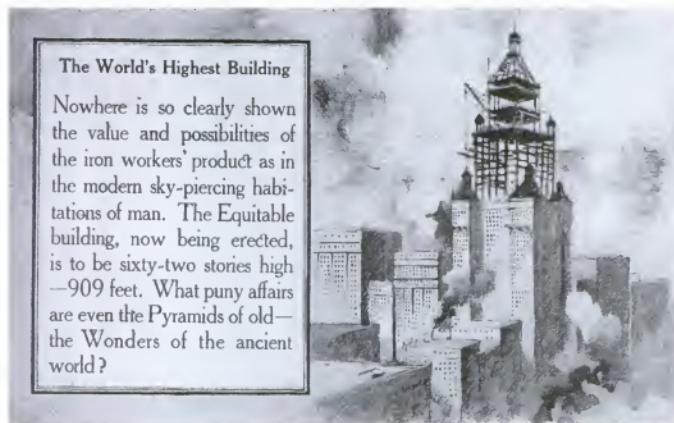
With regards to the skyscraper, *load bearing construction* was the oldest and most primitive kind employed in a structural role. This was the type employed during the earliest age of office building construction in America. A building's load bearing walls were a thick mass of brick or stone that was fashioned into a wall upon which floors were constructed

above. Street walls were customarily very thick, often upwards of six or eight feet and sometimes more. Interior walls were also load bearing with smallish rooms the norm; thick timbers spanned the walls. All support walls were erected in anticipation of having upper stories piled atop; these walls would come under enormous compression and were expected to stand for well in excess of a century. Left alone they would stand indefinitely, and, like churches and castles, their interiors were rigid, forever fixed, and often dark.

Cage Construction

Some early skyscrapers employed the concept of load bearing construction, but for exterior walls only. These office and commercial buildings of six or eight stories were classified as those of *cage construction*. These buildings did employ thick exterior walls but with one difference: instead of filling the interior with cumbersome masonry walls only cast iron or steel columns and beams were allowed to carry the loads of all upper floors. Foundry-produced columns displayed enormous compressive strength and were positioned grid-like throughout the building. Iron girders, sometimes spanning great distances, were inserted into pockets located in the outer walls and their other ends were riveted to the columns. In other instances iron or steel columns were married to the outer walls and served as supports for girders and beams. Exterior walls were still independent of the structure and whatever load bearing walls there were supported only themselves. Consequently, the building's interior was liberated, opened to natural light and the freedom of versatile floor plans, provided for conveniently located entrances, and promoted intelligent elevator placement. Chicago's Monadnock, Boston's Ames, and New York's Potter are but a few skyscrapers that employed cage construction and elevated this structural type to an art.

Skeleton Construction



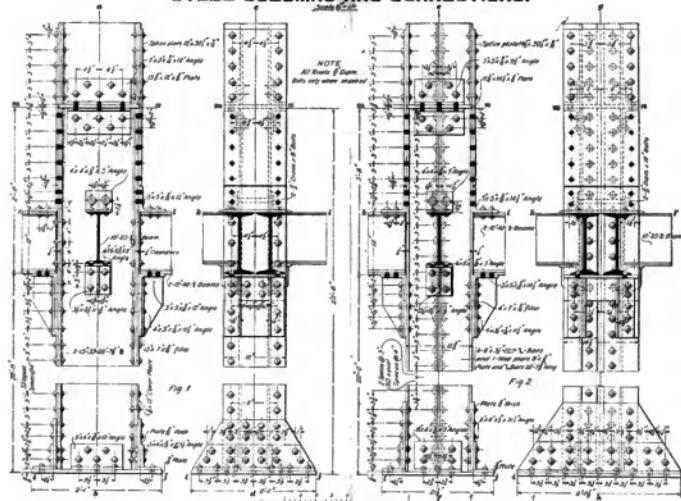
(41) This cartoon of 1908 artistically, not accurately, depicts the "planned" Equitable Building for lower Manhattan. The romantic possibilities of the modern age knew no bounds.

The next logical step in the rather short story of the skyscraper's structural evolution is the complete elimination of the load bearing wall. A geometric grid of metal components,

so arranged, was proved to be far superior to any previous type of skyscraper structural system. Skeleton construction was born when all walls, exterior and interior, were freed from the duty of holding up the building, and whose new task was simply to distinguish inside from out and separate the executive board room from the typing pool. Early skyscrapers were built using cast and wrought iron pieces like beams, girders, columns, plates, and a multitude of other fasteners, saddles, angles and braces. A rigid metal frame, once assembled, was ready to receive the weight of all floors, walls, roof, and all building contents. Later steel, eight times stronger than wrought iron, emerged and became the dominant material – the structural bones of the American skyscraper.

Curtain Wall Enclosure

STEEL COLUMNS AND CONNECTIONS.



(42) Rivet patterns appeared to have been infinite in scope and their placement haphazard to some, but they were not. A sophisticated level of engineering and metallurgy were required for this type of work as depicted in the diagram dated 1893. International Correspondence Schools, A Textbook on Architectural Drawing. International Textbook Co., 1901.

If a skyscraper's exterior walls do no work whatsoever the building is said to possess a *curtain wall* - or is said to have a *curtain wall* enclosure. With this type of design all exterior walls are supported upon a grid of steel columns, girders, and beams. The exterior is "hung" upon the building's metal lattice-work and it serves as a container, an outer wrap, a *curtain* that separates the elements (weather) outside from the inhabitants (tenants) inside; comparatively speaking it is light and transparent. Interior walls are changeable, exterior walls can be all glass with a variety of materials acting to help enclose the inside. Skeleton construction and the curtain wall enclosure system are inseparable. For instance, it is 1905 and the exterior wall of an accountant's future office is being completed on the seventeenth floor of a Chicago office building. This skyscraper is being faced with stone, brick, terra-cotta, and copper. Brick and stone are being laid course by course upon a steel shelf angle and tied back to the structural frame. Four glass windows are being anchored into the bay and a limestone sill is gingerly placed. A decora-

tive terra-cotta panel is carefully wedged above the window group and another bay is complete. At no point are any of these materials doing anything but enclosing a space earmarked for the accountant. Framing the bay are steel columns and beams, the rest is simply infill – the stuff of enclosure. The glass and brick will keep the accountant warm and dry – of course with the aid of mortar, caulk, putty, and paint. It is the steel that will work night and day keeping the building standing, the invisible steel, the forest of metal that is the real hero here, the rust-surfaced skeleton that will be nothing but oblivious to the accountant.



(43) By the time of Chester A. Arthur's presidency (1881-1885) American companies had erected dozens of prominent skyscrapers. The New York Tribune Building was King and Chicago's celebrated Home Insurance was being completed. Now Germany possessed the world's tallest structure. Completed in 1880, Cologne's 516-foot tall Dom Roman Catholic Cathedral wrested the honor from Strasbourg, France. America's entry ranked roughly half as tall as Europe's record holder.

Iron had been used in American buildings for either structural or decorative reasons since the eighteenth century. Cast iron fronted buildings appeared in New York as early as the 1850's and soon after cast iron columns and beams were employed. Cast iron had its positive aspects but also its detrimental; cast iron had no tensile strength (the ability to bend), it was brittle, and it was expensive. Cast iron was unequalled in compressive strength and its beams, girders, and columns could be easily joined producing a metal skeleton. But in 1855, Englishman Sir Henry Bessemer (1813-1898) invented the first process for mass-producing excellent-grade steel inexpensively. The quality and availability of steel made its use ideal for the erection of skyscrapers. New York's Metropolitan Opera House (1883) was constructed with a complete iron-only skeleton. In 1885 Chicago saw rise the Home Insurance Building and the Insurance Exchange, both employed some iron and some steel in its structure. By 1889, New Yorkers witnessed the completion of the Tower Building, another iron-only skyscraper like the Metropolitan Opera House. The very first all-steel skeleton skyscraper was the Rand McNally Building in Chicago (1889).³⁵ Chicago's Second Leiter Building (1891) was the first metal (iron and

steel) skeleton skyscraper, an eight story building *without heavy bearing walls anywhere*. Notable skyscrapers employing combinations of iron and steel were the Morse, Western Union Telegraph, New York Tribune, Montauk, New York Post Office, Potter, and dozens more during this period.

The finest newspaper offices in America. The latest improvements in architecture and printing...³⁶

After a midnight walk down Broadway a few months ago, two gentlemen crossed the breezy interspace of City Hall Park as the yellow disk of the illuminated clock in the tower marked one. A few outcasts were asleep on the benches; the high dark buildings on the Broadway side rose massively, like the embattlements of a fortress, but on the other side several of the larger buildings were luminous in the upper stories, which seemed like rows of lamps hanging in the air. These were the offices of the great morning newspapers, which are concentrated within an eighth of a mile....Clustered among scores of other publishing offices, loomed the buildings of the Tribune, the Herald, the Sun, the World, and the Times, white wreaths of steam rolling up from their roofs and from the gratings over the pressrooms. The pressrooms extended beyond the buildings under the sidewalk, and the pavement vibrated with the beat of the machines....³⁷

New York Tribune Building

New York City

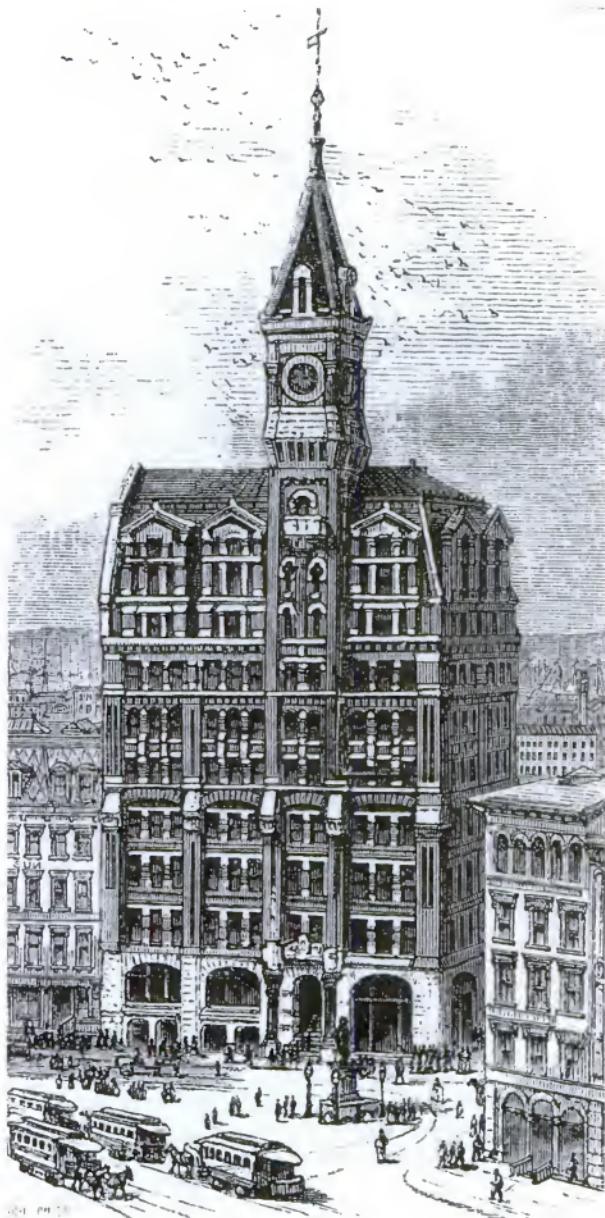
Richard Morris Hunt, New York City

1875

From the outset this skyscraper was conceived of as a monument, a symbol of one of Gotham's mightiest newspapers, the *New York Tribune*. Ever since the building's completion, and until its demise, it served as the monument that it was conceived to be. This skyscraper was instantly recognizable by four generations of New Yorkers, a claim that a dwindling few skyscrapers can still make; Its other claim was that it was once the world's tallest office building, a proud feat indeed.

The *New York Tribune*, a penny daily, was founded in 1841 by prominent publisher and leader in the antislavery movement, Horace Greeley (1811-1872). After the Civil War the *New York Tribune* ranked as one of the most popular newspapers in the city. Its old and cramped quarters on Spruce Street proved to be a hindrance so larger quarters were sought as early as 1872. Newspaper directors decided that only a tall building would be considered. A tight parcel of expensive land at One-fifty-four Printing House Square was secured by the newspaper. Here was the epicenter of the New York, indeed national, publishing world. Within a few blocks were federal, state, and city government offices, banks, exchanges, and a host of other important national and international concerns. It was here that the great New York Tribune Building would be erected.

Richard Morris Hunt, one of New York's more celebrated architects, was given the nod as the building's designer; not surprisingly, this was Hunt's most notable commercial project. Construction of the skyscraper commenced on May 13th, 1873, would last for twenty-three months, and would ultimately cost one million dollars. During the busiest periods of construction over 300 workers labored day and night.



(44) The fanciful and famous Tribune Building - before additional stories were piled on. Harper's New Monthly Magazine, No. CCCXXXI. December, 1877, Vol. LVI "The Metropolitan Newspaper", p.55.



(45) Richard Morris Hunt (1827-1895) This man, known as the "Dean of American Architecture" did much to promote the art of architecture in America and was one of the founding members, the first secretary, and the third president of the American Institute of Architects. Hunt was most noted for his sumptuous houses but his commissions included museums, contributions to the World's Columbian Exposition of 1893, and his occasional skyscrapers - the greatest of which was New York's Tribune Building. Harper's New Monthly Magazine, Vol. LXXXV, November, 1892, "The Designers of the Fair" p. 874.

Excavation and foundation work, as always, commenced first. The New York Tribune Building would occupy a footprint measuring fifty-three feet deep by ninety-one feet along Printing House Square. Initially a twenty-inch bed of concrete was poured at a level twenty-five feet below the curb. Then a mat of granite slabs, each measuring some seven by nine feet, sixteen inches thick, were placed atop the concrete "floor". A second course of granite slabs was placed above the first where load-bearing walls and seven great piers would ultimately rise. Seven-foot thick foundation walls--those that would support the load bearing walls above--were composed of brick and ten-inch-thick granite "bond stones." These were anchored in Portland cement, and together, they formed a monolithic mass that was immensely strong. A sub-cellars then a basement were constructed next.

Coming out of the ground allowed the "street gawkers" plenty to view. Here was a superb example of cage construction. Massive brick walls, stretching back fourteen feet from the front façade, measured six feet thick on the first floor ultimately tapering to three feet four inches at the top floor. The front walls were five feet two inches thick at the street level eventually diminishing to two feet eight inches at the eaves. Each floor rested upon brick walls, wrought iron beams set six feet apart, and wrought iron columns. Brick and cement partitions separated rooms for maximum fire protection and terra-cotta tiles were installed in the floors. The New York Tribune Building owners assured everyone that it was "absolutely fire-proof in every part and built to last forever."

The building's facades were of dark red Baltimore pressed brick, white, and black brick. Sills, lintels, stringcourses, copings and cornices were of light-colored granite. Gutters were made with heavy sheet copper and were attached with solid bronze fasteners to both stone and brick. The arresting color contrasts, segmental arches, lateral and vertical brick piers, granite corbels, pedimented dormers and geometric brick designs energized the front façade. To its detriment some critics found the building's design too flamboyant. Others at the time simply referred to the building as a corporate monument, albeit picturesque with lavish ornament.

No element of the New York Tribune Building was more closely associated with the newspaper, with Printing House Square, with "newspaper row," and indeed New York City itself, than the great clock tower that surmounted the building. The tower, described as a "Florentine campanile" emerged from the office block to climb high above the slate covered mansard roof. The thin, even delicate tower was referred to as "the architectural marvel of the city." It was, after all, a four-sided clock tower measuring seventeen feet on a side. Each of four clock faces was illuminated nightly and measured twelve feet in diameter. Immediately above each clock face appeared "The Tribune" in letters two feet six inches long on granite blocks. The spire atop consisted of an iron framework anchored by heavy iron bands to granite courses sixteen feet below. Above all stood a metal poppy-head finial.

With great fanfare the New York Tribune Building was officially opened on April 10th, 1875. Standing nine stories, 260 feet tall, the Tribune was proclaimed New York City's, and the world's, tallest office building. New Yorkers visited the building's public areas and explored all of its richly appointed interiors, while employees surveyed their new turf. The New York Tribune's first floor was devoted to a public lobby and to banking and counting rooms. Entry into the lobby was through a twenty-foot high granite archway featuring doors of ash and plate glass. Visitors marveled at the expensively appointed floors, walls, and ceilings. Materials employed were black Belgian marble, dark gray Italian Bardiglio marble, red Griotte marble, rich woods of ash, apple, and cherry. Gas chandeliers of bronze provided the illumination here. The second floor housed the newspaper's highly decorated counting room. Floors three through seven served as general office floors, the eighth floor was the home to editorial and management offices. Composing rooms were located on the ninth floor, tucked beneath the mansard roof, and they boasted a ceiling height of twenty-three feet. An attic housed elevator machinery, large iron water tanks for supplying upper floors, and ventilating apparatus. Some executive offices were in the tower just below the clock face while important documents and records were kept in rooms *above* the clock. The paper's presses and newspaper stock were safely situated in the basement along with a beer saloon which "dispensed the rollicking lager to thirsty gentlemen of the press."

The New York Tribune Building also featured two passenger elevators, radiator steam heating, a multitude of speaking tubes, electric wires for lighting, pneumatic tubes for sending messages, and electric annunciators, or telephone-like gadgets. Here was a building that championed cutting-edge engineering while its architecture looked *backward* to the European Baroque.

In what has to be one of the most bizarre engineering oddities in the annals of skyscraper history occurred in 1905 to the New York Tribune Building. The entire top of the Tribune, including the great clock tower, was dismantled and removed from the site. Nine more office floors were piled on top of the original nine. Not to be forgotten, the great

clock tower too was resurrected and rebuilt exactly as it had been originally. Management deemed more office space was required.

In 1924, the *New York Tribune* merged with the *New York Herald* to form the *New York Herald Tribune*. This daily was published until 1966, the same year in which the once "world's tallest" was razed for the expansion of the nearby Pace College. The demolition of such an important and picturesque Manhattan landmark was nothing short of tragic. The *New York Tribune* Building chronicled much of New York City's architectural and human history and it quite simply should not have been erased from the scene.

No single enterprise, in the whole world, has grown so rapidly within a few years as the telegraph interest of America, of which the Western Union Telegraph Company as the principal exponent; and perhaps it is quite correct that the Company should be the builder and owner of one of the most remarkable structures on the continent, if not in the world.³⁸

Western Union Telegraph Building

New York City

George B. Post, New York City

1875

This is the building that communication built – communication in the form of a tiny spark signaling that a letter of the alphabet was transmitted electrically. Here stood a shrine, a building that could have easily been thought a bank or an insurance company headquarters, but rather, it was the heart of a far-reaching communication system linked by copper strands that instantly spoke to thousands. Billed as the "largest telegraph building in the world," the Western Union briefly commanded the skyline as tallest. It was majestic, and yet, it tottered upward from the tangle of wires that bound it to 195 Broadway, an address once known around the globe.

The Western Union Telegraph Company was founded in 1851 in Rochester, New York. By 1866, the Company relocated to lower Manhattan where it remained. Western Union purchased a parcel of land on the northwest corner of Dey Street and Broadway for the princely sum of \$900,000. The site measured seventy-five feet wide on Broadway and extended 150 feet along Dey Street. Here would stand the world headquarters of the Western Union Telegraph Company; it would be tallest and it would fill the site.



(46) Millions of hand-scribbled messages made New York's Western Union Building possible. Picture History.

Western Union Telegraph, in what was the earliest example of a corporate-sponsored design competition for a *skyscraper*, attracted a distinguished field of competitors. Architects Richard Morris Hunt, Russell Sturgis, Napoleon Le Brun, George Hathorne, Arthur Gilman, and George B. Post vied for the prestigious commission. It was Post who got the nod and after two years of construction the great skyscraper was completed. On February 1st, 1875, the doors were thrown open beckoning the amazed public to enter the \$1.3 million skyscraper touted as World's Tallest.

The Western Union's office block rose seven floors—174 feet. Above were three floors which were tucked within a complex mansard roof. Still higher, there stood a whimsical clock tower, measuring fifty-six feet and officially topping-out at 230 feet above the side-

walk. A flagstaff reached yet another sixty-three feet but of course it was not an integral part of the building and was not factored into the record books. With the exception of Trinity Church's steeple at 284 feet - and just four blocks away - Western Union was New York City's highest building, a distinction held for only four months.

New York City's newest skyscraper was faced with red Baltimore brick and gray granite. The walls stood like natural outcroppings, layered stone and brick rose strata-like above the street. All sides of the building were architecturally busy, encrusted with decoration derived from the French and Italian Renaissance. Its top was a veritable European palace. Girding the seventh floor was an iron balcony that no doubt provided tenants with spectacular views and fresh air. Its mansard roofs were compounded, that is, they bumped into one another for supremacy while no singular one appeared preeminent. These roofs were framed with wrought iron rafters, beams and posts.

Structurally, the Western Union Telegraph Building was of cage construction. Exterior load bearing walls and interior masonry walls were helped with some wrought iron columns; these supported wrought iron girders and beams, but by 1875, said construction principals were widely used. Consequently, this building broke no new ground with regard to construction, despite being the tallest in New York City and a delight to its citizens. The Western Union was, however, one of America's first office buildings to employ elevators. Originally the Otis Elevator Company of New York supplied one hydraulic passenger, two eighteen-passenger steam-driven elevators for public use, and one steam-driven freight elevator. Additionally, the Cyrus W. Baldwin Company of Chicago supplied a fourteen-passenger elevator for the exclusive use of the company's employees.

The sky over Broadway, near the Western Union tower, was positively charged with energy as hundreds of taut cables hummed with information. Like the hub of a spoke wheel the building reached to all corners of the globe and was bestowed with epic proportions and importance. Here was the epitome of a corporate headquarters building and the nerve center of America. In 1878 Western Union had 7,672 offices, 12,224 employees, and operated on 199,022 miles of cable. In size it clearly ranked larger than any competitor, and by 1890 Western Union claimed a whopping 19,382 offices worldwide. Yet, the Western Union Telegraph Company was anything but a conglomerate or monopoly. By 1878 its competition included some 132 companies, most of which were small local entrepreneurial kinds and none had a headquarters that rivaled Western Union's.

"The Great Operating Room" was what they called it. Located on the eighth floor it measured forty-five by 145 feet and stood twenty-three feet high. This room featured hardwood floors and the din of voices and machines. The voices sprang from the 290 operators employed there – 215 men and seventy-five women. The "furniture" tally included 459 operating tables, 410 Morse sounders (telegraph machines), six Phelps motor printers, thirty sets of duplex printers, forty-nine sets of quadruplex printers, five automatic repeaters, eight "typewriting machines," and ten Wheatstone perforators. In 1878, the number of telegrams handled in this room reached 93,127, and by 1892 it topped 105,000 daily. Employees often toiled here ten hours per day. Racing through the aisles were check girls and boys shuttling messages, where overhead, were positioned pneumatic tubes stuffed with the messages of thousands. This incessant beehive operated with three shifts and, in total, was staffed with over one thousand people.

Tragedy befell the building on July 18th, 1890 when its sixth floor became engulfed in flames. Electric batteries that provided required current caught fire resulting in serious

damage to the upper floors. The fire was credited with the destruction of the building's landmark clock tower and its distinctive mansard roof. Not until February 22nd, 1892 were repairs completed, extra floors added, and the building extended fifty feet to the west. To be sure, it was a ghost of its former self.

In a somewhat different type of communication the Western Union Building, like other early Manhattan skyscrapers, possessed a rooftop "time signal." This was a large iron mast that rose some twenty feet and supported a huge shiny metal ball. Each day, exactly at noon, an electric signal from the United States Naval Observatory in Washington, D.C. caused the ball to slide down to the base of the mast. That action alerted observers to synchronize timepieces thus maintaining a standard time. This quaint anachronism was ceased in 1913 when other skyscrapers obstructed its view.

Like too many pioneer skyscrapers the Western Union Telegraph Building was destroyed. In 1915 this office building, with a palace on top, was pulled down and replaced by the 28-story, 403-foot tall American Telephone and Telegraph Company Building (Welles Bosworth, 1916).

New York Mutual Life Building

Boston

Peabody & Stearns, Boston

1875

This delightful, yet solemn, building was Boston's tallest. It stood seven floors, 234 feet, and served as the Boston office for the Manhattan-headquartered New York Mutual Life Insurance Company. It rose proudly above Post Office Square, was touted as "strictly fireproof," and was considered a very successful business enterprise.

Stylistically, the New York Mutual Life was executed in the then-popular French Renaissance Revival style. The facades were elaborate. A mansard roof, rounded pediments, and Corinthian pilasters girded the office block. It was wrapped with white marble and featured a slender tower with a gilded balcony. This observation balcony was 198 feet above the sidewalk and it provided an unrivaled view of the city and harbor to all who cared to climb the steps to access its outdoor platform. The tower also featured a four-faced clock, each face ten feet six inches in diameter. The striking hammer weighed 150 pounds, the bell 3,700 pounds, and three immense weights equaling 2,500 pounds.

Those responsible for such a romantic structure were none other than what many then judged Boston's most talented architectural firm, Peabody & Stearns. The design team of Robert Swain Peabody (1845-1917) and John Goddard Stearns (1843-1917) was formed in 1870 and lasted an astonishing forty-seven years. Peabody attended Harvard College and after graduation in 1866 set off to Europe. In England and France he studied the noted buildings and was professionally trained in architecture at the Ecole des Beaux-Arts. Upon returning from Europe Peabody began an architectural practice in with Stearns in Boston. He was an architect of wide acclaim designing many homes, private and public buildings and churches. Stearns, a New York native, studied architecture at Lawrence Scientific School at Cambridge, graduating in 1863. He entered the Boston office of Ware & Van Brunt to train under Mr. Ware. John Goddard Stearns died less than one month after his long-time friend and design partner Robert Peabody.

The romance of Europe's palazzos and bell towers left its mark on many America travel-

ers, especially its soon-to-be-architects. Peabody recalled those buildings that moved him in Europe, and perhaps snippets of each surfaced in later designs. Boston's tallest building in 1875 was perhaps just one. Its pedigree aside, the New York Mutual Life Building was demolished. In 1945 it fell, and its bell was silenced forever. A new parking garage was the excuse.

New York Evening Post Building

New York City

Thomas Stent, New York City

Charles F. Mengelson, New York City

1875



(47) New York's Evening Post Building was the home to one of the city's dozens of newspapers being published in the 1870's. Harper's New Monthly Magazine, Vol. LVI. December, 1877, "The Metropolitan Newspaper", p. 51.

The New York Evening Post Building ranks as one of the early skyscraper pioneers in Manhattan, indeed anywhere. It stood by means of cage construction and rose an impressive ten floors, 140 feet. It occupied the southeast corner of Broadway and Fulton Street in what was, and continued to be, a tight knot of early and significant tall office buildings like the Bennett (Gilman & Farnsworth, 1873), Western Union (Post, 1875), Corbin (Hatch & Kimball, 1889), and the Mail and Express (Carrere & Hastings, 1892).

The force behind the erection of this skyscraper was the New York Evening Post, a daily newspaper that was founded in New York City in 1801. All newspaper functions were

handily accommodated within the structure and were woven between and below large interior columns of cast iron and beams of wrought iron. Exterior walls were load bearing, and at the sidewalk were three feet thick tapering to two feet at the ninth floor. Floors were composed of brick covered with concrete. Employees and visitors were taken upward by hydraulic elevators.

Architecturally the New York Evening Post Building was confused; some found that it leaned toward no clear and distinct style. Its visual medley included inspiration from the French neo-Grec, and from Italian sources. Nevertheless, it was a ten-story brick box with stone trim. And yet, it was so much more. Here was what might be considered the progenitor of the "modern" skyscrapers yet to come, ten years before the completion of Chicago's Home Insurance Building (Jenney, 1885). This newspaper's headquarters building had a flat top, perhaps the first skyscraper in New York City to have one. The octagonal cupola appeared as an afterthought and it rested upon a *level roof*. The Evening Post rose sheer from top to bottom without a setback. Rank after rank and row after row of windows, here is a study in simple geometry. Due to its load bearing walls glass accounts for less than half of its wall surfaces – which appear heavy and ponderous. This was the price paid with cage construction. Yet, here stood a singular expression without clock towers, steeples, domes, or extraneous decorations like pediments or colonnades. To avoid what might have appeared to Victorian eyes a very paltry design, some obligatory carvings and a heavy cornice was included, probably to the detriment of the skyscraper's design aesthetic.

In 1906, the New York Evening Post vacated the offices in the skyscraper they constructed only thirty-one years earlier for larger quarters a few blocks away. Their newspaper building was removed from lower Manhattan decades ago.

New York Post Office and Courthouse

New York City

Alfred B. Mullett, Washington D.C.

1875

Construction of this government office building began in 1869 and lasted until 1875, its completion occurring just ten years after the end of the Civil War. It was opened with great fanfare on August 25th, 1875 and it remained a landmark in lower Manhattan for decades. Here was the first skyscraper ever erected by the federal government - a great stone pile, albeit more horizontally than vertically disposed. Here, too, was a many-storied office building, a structure with a passenger elevator, fireproof walls and floors, and a building that was one of the first to be electrically lighted throughout. The New York Post Office and Courthouse figured prominently in the evolutionary process of skyscraper development.

Appearing clearly and decisively on the skyline, the New York Post Office rose seven floors, 195 feet tall; only the New York Tribune and the Western Union buildings were taller there. In fact, Chicago's Home Insurance Building of 1885, generally bestowed with the title of "*the first skyscraper*", only rose ten floors, 130 feet, thus measuring sixty-five feet shorter than the New York Post Office of a decade earlier.

The prominent corner of Broadway and Park Row was the site for the very prominent, trapezoid-shaped New York Post Office. It had a frontage of 279 feet on the north narrowing to 144 feet on the south. The great building was constructed of light-colored gran-

ite and its total cost was \$7 million.

From the outset, the French Second Empire design of the building was more than controversial. Architecture critics railed at its appearance and other wags simply labeled it a monstrosity. Others felt the Post Office exhibited a repetitiveness, the inescapable characteristic of bureaucratic architecture. Still, this was the design favored by its English-born architect, Alfred B. Mullett (1834-1890). The Post Office had dignity and it did possess the tripartite facade organization so adhered to in later skyscraper design. Here was a building that clearly displayed a fanciful base, repetitive office floor mid-section, and a celebratory top.

Inside, hundreds worked in a compartmentalized and jumbled sea of office areas, something typically Victorian. The first floor featured a glazed central court, its glass canopy fixed thirty feet above the floor. A twenty-five-foot-wide balcony ran around the perimeter of the court and was reached from the main floor by several iron staircases. United States Circuit and District Courts occupied spacious chambers and public rooms on the third and fourth floors, the floors of which were connected by private staircases. The United States marshal's office also shared the fourth floor. Offices for dozens of government auditors, cashiers, stamp officers, and others were sprinkled throughout the building. The handsomest rooms in the building were those occupied by the Circuit Court judges. Each of these was forty feet in height, the area of the floor being forty by sixty feet. The ceilings, walls, and floors of all rooms and corridors both public and private, were richly and handsomely appointed. Cherry trim could be found throughout the building.

Upon completion, the Post Office building had one passenger elevator in operation. The elevator was a hydraulic operated type with a telescoping cylinder placed directly below the cab which lifted and lowered the cab to the desired floor. In 1878, the Post Office became one of the first buildings to be electrically lighted by the United States Electric Lighting Company. Concrete also played a major part in the construction of this building. Some 7,100 cubic yards of concrete were used for the foundation, 42,400 for the floors, and 3,300 cubic yards of concrete for the roof. Here too, with Post Office building, for the first time anywhere was the introduction of hollow tile flat arches inserted between iron floor beams - a significant fireproofing technique.

This was a pioneering structure, a significant piece of architecture that convincingly looked to the future, to the future of the American skyscraper. Nonetheless, the New York Post Office and Courthouse was razed in 1939.

Park Avenue Hotel

New York City

John Kellum, New York City

1878



(48) This unrivaled iron confection, the Park Avenue Hotel, was an unforgettable sight when its white-painted walls glistened in the sun. The Hotels of New York City, Robert Stewart, Munsey's Magazine, Vol. XXII, No. 1, October, 1899, 281.

In March, 1878, this majestic, mansardic pile opened to the delight of thousands of New Yorkers. Nothing like it existed. On Park Avenue's west side (between Thirty-second and Thirty-third Streets) stood an immense cast-iron box, painted bright white, draped with flags. Here was a hotel for women only that included long-term residences and the enforcement of strict morals. After only three months the hotel was opened to all, morality optional.

The Park Avenue Hotel was planned by Manhattan millionaire entrepreneur Alexander Turney Stewart (1802-1876), and designed by the noted architect John Kellum (1807-1871), both of whom would die before the hotel's completion.

This was the largest and most notable cast-iron fronted building in New York. Work commenced in June, 1869 and proved to be a formidable task. The site would be completely filled, the building fronted 197 feet on Park Avenue, measured 205 feet deep, and rose 102 feet. Included (as a delight to all guests) was an interior courtyard measuring

ninety-four by 116 feet. The hotel featured eight reception rooms, multiple dining rooms, parlors, and a gracious reception lobby. Multiple staircases, passenger elevators, and electric lighting were available to guests at its opening. The eight-story, three-million dollar hotel boasted 502 guest rooms.

This luxury hotel's significance lies not in its chandeliers and silks, but in its construction process, and those materials employed. The Park Avenue was a heavy iron and brick building supported by interior load bearing walls measuring between three and six feet thick. These bearing walls rose from the foundation to the top floor. Wrought iron I-beams spanned between bearing walls and exterior columns.

What was so prophetic was the use of a cast-iron curtain wall. Cast-iron panels, formed in a foundry, were suspended and bolted around the building's perimeter at each floor. These were simply iron "screens", themselves not self supporting only enclosing devices. They were painted a bright white to simulate marble and to retard rust. Here was a building with an early form of curtain wall, that had elevators and electric lighting, and that rose higher than any building at its time in that neighborhood. Though it was not steel skeleton construction it possessed much in modern technology.

Being one of the most superb and grandiose cast-iron fronted buildings ever constructed – anywhere, did not guaranty it immortality. The Park Avenue Hotel was demolished in 1926.

Grain Exchange Building

Milwaukee

Edward Townsend Mix, Milwaukee

1879

The Grain Exchange Building is a Victorian landmark built to house, what was for a short time, the world's largest grain exchange and the offices of the firms that bought and sold commodities. Merchants and brokers came here to speculate in wheat, corn, soybeans, hay, and other products. The great trading room, with visitors' balcony, rises three floors and occupies an area sixty by 115 feet. This Italian Renaissance-style space is rich with frescoes, stained glass, columns, arches, stenciling, and carvings. The architecture and strong coloring of the interior fuse into a burst of unmatched Victorian dazzle.

Just after the Civil War Milwaukee exported more wheat than any other port in the world, and at this busy commodity exchange the octagonal trading pit was invented. Various trading pits (lowered floors encircled by rising steps where traders gathered) were located on the floor of the great trading room. Large wooden tables, piled high with samples of the grain for inspection by brokers, stood by.

The Grain Exchange's six-story facade is dressed with limestone and granite and is replete with gargoyles, allegorical figures, and other Renaissance-inspired ornaments. Wisconsin's state seal and motto are visible as well as a carved bull and bear, symbolic market indicators. Mercury, the Roman god of trade, commerce, and travel, is prominently poised at the main entrance; reliefs of a steamship and train locomotive represent the nineteenth century. The carved words 'Chamber of Commerce' refer to a one-time, but important, tenant of the building.

Above the office and trading block of the Grain Exchange Building rises a square, 175-

foot tower. This strong vertical element features a four-sided clock, a one-ton bell, and is capped by a copper-clad cupola. Gargoyles guard each corner of this campanile and a small circular observatory is accessed via a spiral staircase.

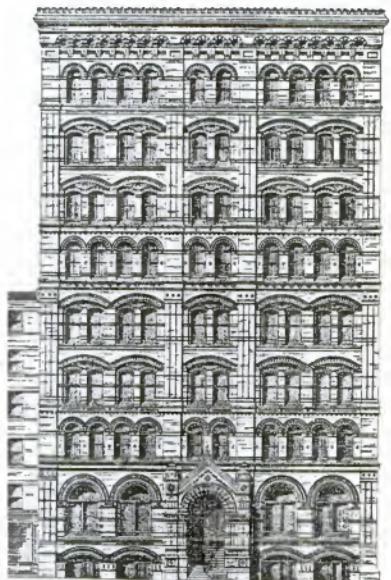
Structurally, the Grain Exchange Building is supported by load bearing granite walls, walls that are over six feet thick at its base. The offices of attorneys, manufacturers, exporters and importers, merchants, and banks formed a periphery around the trading room located in the building's core. This large space is transversed by iron girders and beams and is supported by attenuated iron columns. Upon completion, the Grain Exchange was serviced by one steam-driven passenger elevator.

Morse Building

New York City

Silliman & Farnsworth, New York City

1880



(49) The Morse Building showing original front façade as drawn by Farnsworth Architects.

With this singular structure one is presented with an extraordinary piece of skyscraper history. Here, *still standing*, is a building that predates the often touted Home Insurance of Chicago, the Record of Philadelphia, the Produce Exchange of New York, and dozens of skyscrapers of the first generation – almost all of which no longer stand. Here is a skyscraper that predates the completion of the Brooklyn Bridge (1883) rising only three blocks away. Here is a dignified skyscraper that speaks to us of former times, of ancient ways and inventions, and of the values of its age. One cannot ask more of architecture.

The Morse Building, whose construction began in early 1879, was constructed as a speculative venture by profit-seeking investors. Those investors were none other than two nephews of the American artist and inventor Samuel F. B. Morse (1791-1872), whose workshop was once located on this very site. This parcel, located on the northeast corner of Nassau and Beekman Streets, measured eighty-five by seventy feet, and would come to be fully occupied by the new skyscraper.³⁹ When completed, there was much praise for its design and altitude. The Morse stood nine stories, 165 feet tall - higher than all but a few in the city. All four walls rose sheer from the street to a level top. Cage construction marked its inner structure where basement walls measured four feet thick, and at the first floor level they measured three-and-one-half feet thick. These load-bearing walls bore the weight of massive iron beams that spanned the floors. Like others of its ilk the Morse was heated by steam, lighted by gas, and was served by steam-driven Otis elevators.

The exterior of the Morse Building was faced with a deep red-colored brick. Black-faced brick was interspersed with the red and it was included as a successful decorative device. Deep red-colored terra-cotta also figured prominently. Its principal facade was divided into three bays by two continuous brick piers, while visually strong corner piers acted as "bookends." Superfluous ornament was lacking. Segmental arches and semi-circular arches danced above windows from top to bottom. An unpretentious brick cornice halted its perfect upward symmetry.

The much respected design magazine, *The Architectural Record*, praised the "two young and serious architects", Benjamin Silliman, Jr. and James M. Farnsworth, for their design of the Morse Building saying that it stood "with intelligence and with more than a fair measure of success." The article continued to praise the skyscraper by stating that "It was built, of course, when the two factors that have enabled the modern office building to be constructed, the elevator and the steel frame, only the former was available."

This skyscraper's twenty-first year marked a turning point in the building's future. New owners and new tastes had arrived.

In 1902, *The Architectural Record* critically examined the recent "remodeling" of the exterior and the inclusion of three more stories to the Morse – then, renamed the Nassau-Beekman Building. Tragically, whatever vague – or otherwise – Gothic detailing there was at street level, and at the ninth floor, was erased. Renaissance facades were substituted, there, and were wholeheartedly employed for the added floors plopped on top. A stranger hybrid might not exist.

Any following "misspellings" in the following architectural critique were intentional and were included for added derisive effect by this magazine's anonymous author:

In the case of the Morse building the change is "a matter of taste." It is a paralyzing piece of insolence. The owner has spent good money, though to be sure the minimum amount and in the most meanest way, in spoiling good work because he liked bad work better, or expected that his tenants would like it better, and that he could more easily get them to take quarters behind the stupid sham with which he has fronted and hidden a piece of architecture than behind the architecture itself. It is a strange calculation, almost insulting to those upon whose bad taste he so confidently counts. He is a subject for the psychologist. And a subject for the psychologist, also, is the "architect," who has been invoked and who has

consented to convert a work of architecture into a work of architecture, to organize and slat terrify a respectable building into this absurd and incongruous and brainless sham. Did the architect, too, really imagine he was doing good to be building and bringing it "up to date." Did he try to bring his owner to a better mind, and assure him that he was engaging in a work of stupid vandalism? Or is it possible that he saw nothing but the commission he was to get for spoiling the building, and that he had no qualms about obliterating the work of his intellectual superiors?⁴⁰

After such a literary thrashing it is not surprising that *The Architectural Record* did not identify those responsible for the alterations. They were William P. Bannister (1869-1939) and Richard M. Schell (d.1924) of New York City.

Despite the changes that 120 years have brought about, this pioneer still impresses. By viewing the Morse one drinks in its deep-red walls, emphatic shadows, and strong brick arches. Now a choice residential building, it still pleases on an aesthetic, historic, and cerebral level. Here is an urban landmark of the first order.

It will be agreed, however, that the *Record Building* is of a weird and wondrous ugliness, and also that from the Philadelphia point of view it is highly successful since it is absolutely certain of being noticed.⁴¹

Record Building

Philadelphia

Willis G. Hale, Philadelphia

1881

The Record Building was the home to the Public Record, a Philadelphia newspaper described at the time as a city paper that "...represents the profits of a daily penny paper, giving news in a condensed form, to meet the wants of a working and busy public."⁴² This building, then, represented "profits." It also represented much more, the aspirations of an architect who ventured beyond what was acclaimed, then, as "good taste."

Willis G. Hale (1848-1907) created this rather personal interpretation of what an office skyscraper could, or should, be. Much of Hale's work was influenced by his mentor-architect, Frank Furness (1839-1912), also a Philadelphian, who championed the picturesque eclectic style. Like Furness, Hale worked in and through a well-defined range of American architectural expressions that stressed the accumulation of discordant details, colors, textures and ornament. The Record Building's design challenged the accepted aesthetics of a nation, a nation unaccustomed to viewing flamboyance coupled with altitude that only the skyscraper could offer. In this case, the nation's critics – or many of them – found "ugliness".

The granite-faced Record Building stood eight floors on Chestnut Street, was of cage construction, and was executed in a quasi-Victorian Gothic style. Each structural bay was filled with clear glass, a modern approach indeed. But, the Record's piers and spandrels were heavily carved and they supported Gothic-inspired motifs, a somewhat incongruous marriage. The building's main entrance was framed by giant, menacing-looking, banded columns and piles of stonework. Pushing above the main building cornice was an overbearing and top-heavy tower that displayed yet more carvings, spiky finials, and "banners" in relief revealing the building's name.

The Record Building's design drew ire from *The Architectural Record*:

The banded columns at the entrance constitute a highly Philadelphian feature, and are as bad as bad can be. Comparatively delicate shafts are imposed on ugly and stilted bases and rudely interrupted by shapeless masses of stone projected from the walls and carry other shapeless masses, which carry conical masses retreating against the pier to assure us that the whole feature has no meaning at all but is pure architecture.⁴³

Time has a way of softening the sharp edge of commentary – even for an "ugly" building – to the degree that few contemporary historians would not mourn the loss of this early skyscraper. The *design* of the Record Building illustrates to what extent early skyscraper architects would venture - to come to terms with the idea of a "new" office building *type*. The Record was anything but common, as a piece of artwork it pressed the limit of design tolerances for a culture that shunned the outrageous; *perception* in art and architecture, governs success. The Record Building captured the imagination of the public; it spurred controversy among some, and yet, was easily recognized by most Philadelphians.

*To the 10-story Montauk building (1882-1902) was first given the name of "Skyscraper."*⁴⁴

*The first protagonist to appear in the lists was the Montauk Building [sic]. To indulge in hyperbole, what Chartres was to the Gothic Cathedral the Montauk Block was to the high commercial building.*⁴⁵

*One day Louis [Sullivan] dropped in to see John Root in his office in the "Montauk," a large office building recently completed by his firm. John was in his private room at work designing an interesting detail of some building. He drew with a rather heavy, rapid stroke, and chatted as he worked.*⁴⁶

Montauk Block

Chicago

Burnham & Root, Chicago

1882

The Montauk Block was Chicago's first ten story building. It was an early skyscraper puzzle, a three dimensional problem where many things had to be figured out, some for the first time. With this project architects, engineers, and developers came together, perhaps as never before, to explore the economics of the office building, to analyze the value of ornamentation, to question the extraneous, to build for the greatest amount of financial return – for the developers. Furthermore, some say this was the first building to be known as a "skyscraper."

Burnham & Root's first significant commission came to them in the form of the Montauk Block. They were awarded the "prize" in February, 1881, and by July of the same year there existed a complete set of drawings for what was to be a ten-story office building; Upon completion the Montauk had more stories than any other in Chicago. Bostonian entrepreneurs Peter and Shepard Brooks backed the project and were locally represented by their attorney and "on-site" man, Owen F. Aldis. Peter Brooks chose the name "Montauk" referencing the eastern seaboard as he would do on other successive pro

jects. This was the team that soon would put up some of the most astonishing skyscrapers of the nineteenth century.



(50) Chicago's Montauk Block. Chicago Historical Society

There is a small resort town on the tip of Long Island, New York, called Montauk. There was a smallish skyscraper in the center of Chicago called the Montauk Block. The town is still there, but the Block is not.

Constructing a ten-story, 130-foot tall skyscraper in 1882 was a daunting prospect. Underground conditions were challenging at best, attributable to Chicago's swampy conditions in what had become the most valuable business quarter of the city. The Montauk Block's planned location was mid-block site on Monroe Street, ninety feet wide by seventy feet deep, hard against an alley on its east side. What concerned engineers most was just how a relatively heavy brick and iron skyscraper was to stand on what was essentially a soup of sand and clay. The solution chosen was termed a *floating raft foundation* and involved the construction, beneath where each supporting wall and column was to be, of a twenty-inch thick slab of concrete threaded with iron rail grillages. This was the "raft" and it possessed the required compressive strength to support its share of the total building load.

The Montauk Block rose from its foundations and stood by means of a combination of massive load bearing brick walls and interior cast iron columns in combination with wrought iron floor beams, i.e. a classic example of *cage construction*. Exterior and interior load bearing walls, running from the foundation to its roof, were threaded with iron

beams and columns until the resulting structure was a massive trussed box. Interior floor plans were inflexible, all rooms and hallways remained as planned – forever. All columns and beams were encased with clay tiles as fireproofing, and all floors were shielded from fire by the use of flat-arched floor tiles. Boilers and other building machinery were located in an annex to the rear of the building.

Architecturally, the Monroe Street elevation possessed whatever interest existed; the other three facades were alley facing or abutted other structures and offered no embellishment whatsoever. The building was a plain red brick container, without setbacks, with a flat roof hidden by a parapet. A pavilion pushed timidly from its asymmetrical façade giving some relief to the otherwise flat-fronted skyscraper. A two-story, sparsely detailed, archway marked the Montauk's main entrance. Floors appeared as thinly stacked trays, each separated by a stringcourse, with exactly seventy-eight shallow-arched windows marking the offices within.

Despite its aesthetic severity, judged harshly by some, the Montauk Block quickly filled with tenants. Chicago's newest skyscraper, a speculative business venture, was home primarily to insurance companies and law firms and contained 150 offices for an estimated 300 occupants. The building offered its tenants and guests two passenger elevators and comfortable, not luxurious, accommodations. Total cost of the project was recorded as \$325,000.

In 1902, after standing a mere twenty years, the Montauk Block was demolished. The First National Bank purchased the property and proceeded to construct its new seventeen story headquarters at that site.

Temple Court
New York City
Silliman & Farnsworth, New York City
1882



(51) The prim Temple Court recalls London's business blocks. The street walls hide its pyramidal glass canopy covering its interior court. Photo by author.

Lower Manhattan was again home to one of this nation's early skyscrapers upon the completion of the Temple Court. It rose on the southwest corner of Beekman and Nassau Streets; an intersection once tangled with horses, wagons, buggies, and pushcarts. This ten-story office building was of cage construction, was built with three passenger elevators, and was one of the last commissions executed by the firm of Silliman & Farnsworth. When completed, the Temple Court was the particular favorite of attorneys, architects, and physicians; it continues to be the home to dozens of business firms. Today it remains an impressive and important architectural whisper from the past, a phrase of Ruskinian Gothic.

The Temple Court retains much from its very beginning. Exterior walls of dark red brick are trimmed with cream-colored limestone. Its facades are punched with deep recesses rendering these walls vibrant, almost energetic. Large glass windows provide openings and counterpoint to the opacity of the stone and brick – the whole a patchwork of muscular solids and sparkling transparencies.

Above the roof spring two corner towers, each capped by a steeply pitched eight-sided "pyramid." These distinctive roofs are topped by iron finials and braced with brick tourelles at their bases. The Temple Court's corner towers recall the architecture of Romanesque abbeys and the twin-towered German cathedrals of the tenth and eleventh centuries. Situated in the center of the skyscraper's *flat* roof is a shallow pyramid of glass and iron, a canopy marking the location of its once famous interior court and part of its namesake.

Metropolitan Opera House Building

New York City

Josiah Cleaveland Cady, New York City

1883

The Metropolitan Opera House was the first and the last such building designed by Josiah Cleaveland Cady. He and his office generated over 400 drawings for the Metropolitan Opera House Building, a block-wide project that included an opera house, and two skyscrapers with commercial and residential space. The project employed an iron cage for support, passenger elevators, gas – and then electric lighting, and a crude – but effective – air conditioning system. This was a true architectural pioneer.

Toward the end of the nineteenth century New York was regarded as America's most important city. This great metropolis was the most populous and it was the center of entertainment, business, finance, culture, and a host of other pursuits; in this milieu opera figured prominently. In a time when much of America was still being carved out of the wilderness, when Indian wars raged, buffaloes were slaughtered, and when gun fights settled arguments in dusty towns, New Yorkers could avail themselves of Puccini, Wagner, and Bizet. The Metropolitan Opera House was America's first permanent home for grand opera and it remained an important cultural venue until its demolition.

The Metropolitan Opera House Building was an early and excellent example of a multi-use project. Included was the opera house proper, and flanking it on both sides were seven-story apartment buildings complete with ground floor commercial spaces: a major bank once occupied the corner of Thirty-Ninth and Broadway. Economic conditions dictated that supplementary income generated from rentals was an important consideration

to the viability of the undertaking. The Metropolitan Opera House Building stood just south of Longacre Square, now Times Square, facing Broadway, and it filled the block bounded by Thirty-Ninth and Fortieth Streets, Seventh Avenue and Broadway. This coveted site measured 245 feet deep by 200 feet fronting on Broadway. The site's cost: \$600,000.

A competition for awarding this prominent undertaking was favored by the opera company's board of directors. Those firms asked to submit building plans were Cady, Berg & See, Potter and Harrison, G.E. Harvey, and George B. Post. It was the firm of Cady, Berg, & See which prevailed. Josiah Cleaveland Cady (1837-1919), principal of the firm Cady, Berg & See, was responsible for the project's design. Cady garnered a reputation as an expert in the building and design of Gothic-styled churches, hospitals, and college buildings; he was also responsible for the main building of the Museum of Natural History, a giant Romanesque pile completed in 1899. For the opera house project, Cady was the architect chosen by the directors of the Metropolitan Opera Company, some of whom bore the names Roosevelt, Astor, Belmont, Lorillard, Goelet, Morgan, Gould, and Vanderbilt. Having recently formed, the Metropolitan Opera Company hoped to be recognized as one of the great institutions of New York and one of the principal places of amusement for Victorian-age New Yorkers. For that to happen, a prominent home was needed. Construction commenced in 1881 with a spring of 1883 completion date. The building grew swiftly.

Architecturally, the exterior of the Metropolitan Opera House Building was of a subdued Italian manner, a scholarly exercise in yellow brick and brown stone. Although a very complex architectural problem, Cady proceeded to refine and simplify what in less adept hands could have been a far less rewarding building. The parti located the auditorium in the middle flanked by apartment blocks that rose seven floors, 127 feet high. These were of metal cage construction hidden by traditional masonry exteriors. The auditorium had a roof carried on flat iron trusses surrounded by a shell of iron-framed office and apartment floors. In all, three million pounds of iron were used, including over 100,000 separate pieces (excluding bolts, plates, and brackets) such as channels, rods or other structural parts. Lighting was provided by gas, and as soon as electric lighting became economically feasible it was employed. The Otis Elevator Company supplied the elevators.

The auditorium was a lavish, gilded space, and exquisite temple to music. Paintings, sculptures and carvings abounded contributed to its overall figural space. Below all this were beams and columns that did all the work; there were giant pillars supporting a single girder eighty feet long, fifteen feet deep that spanned and helped to frame the stage. The auditorium originally consisted of 5 balconies, 35 boxes, and 3,700 seats.⁴⁷ The stage dimensions were ninety feet deep by 106 feet wide. Large exhaust fans removed hot air and continually forced fresh air into the auditorium. The total cost of the project was \$1,732,978.21.

On July 21, 1883, reporters were given a glimpse of the completed home of the Metropolitan Opera Company. The final product was not well received. Some critics referred to it as "ugly" or as a "yellow brick brewery" by James H. Mapleson, impresario at the Academy of Music. Despite some detractors, others found that the beauty, finesse, and sheer magnificence of the auditorium was second to none. Controversy was abundant and even in later years, in 1938 for example, the "Met" was derided:

The opera house was designed by J. C. Cady, a prominent architect of the day. That Mr. Cady was without experience in theater construction seemed to matter little; audiences ever since have paid for his mistakes, as but half the stage can be seen from the side seats of the balcony and family circle.⁴⁸

But despite its major shortcomings, the new building opened with great fanfare. On the evening of October 22, 1883, the offering was "Faust." During its existence it was a Mecca for music lovers, home theater for distinguished operatic singers, New York's and the nation's headquarters for operatic entertainment. It regularly featured operas sung in Italian, French and German.

The theater suffered a fire that gutted the supposedly fireproof structure on August 27th, 1892. It was quickly rebuilt, and was redesigned by the New York architectural firm of Carrere and Hastings most probably to the delight of some 700 ticket holders whose seats only had a partial view of the stage. Still, the "Met" reigned as one of the Grande dames of the opera world.

Time eventually did catch up with the Metropolitan Opera House Building. After eighty-three years of entertaining countless thousands, the opera house was deemed archaic and its demolition became eminent. Despite some attempts by historic preservationists the final curtain call occurred on April 16th, 1966. The dominant opera company in the United States and one of the most important in the world removed to Lincoln Center's Metropolitan Opera House, a \$50 million extravaganza designed by New York architect Wallace K. Harrison. For the controversial opera house on Thirty-Ninth Street demolition came swiftly in 1967.

Potter Building

New York City

Nathan G. Starkweather, New York City

1883

This gracious building still presides at number Thirty-eight on that great and historic thoroughfare, Park Row. The Potter also stands at the juncture of the centuries old Theatre Alley and Printing House Square. Few locations anywhere are as pivotal and even fewer cities have a skyscraper of this importance and vintage.

The historic Potter Building is a noted skyscraper, recognized for being the first New York City building to be fireproofed by terra-cotta and the first to use ornamental terra-cotta as an exterior "wrapping" material. Its robust exterior survives quite intact and hearkens to the days of the horse-drawn omnibus, hawking curbside newsboys, vibrating presses, and morning deadlines.

The Potter Building's site was formerly occupied by the headquarters building of the New York World newspaper. In what was described as one of the worst conflagrations in New York at that time, the structure quickly succumbed to a relentless fire of total destruction. Almost immediately a leading New York real estate investor purchased the site. Orlando Bronson Potter (1823-1894), a Massachusetts-born lawyer, manufacturer, financier and politician could now erect a business block, a building bearing his name.

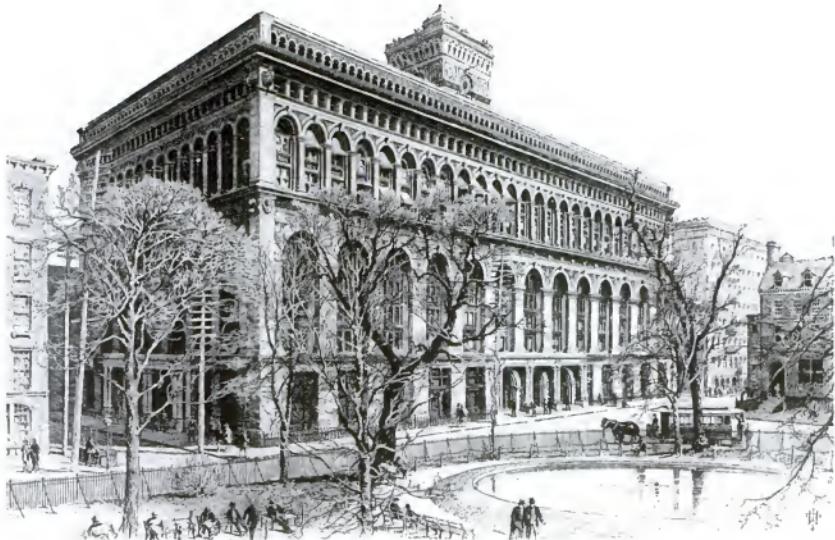


(52) The delightful facades of New York's Potter Building have beguiled pedestrians for over a century.
Photo by author.

Upon completion, the Potter Building rose an impressive eleven floors, 195 feet tall. It fronted ninety-seven feet on Park Row, ninety feet on Nassau, 145 feet on Beekman, and it abutted the neighboring Times Building 104 feet. The Potter Building featured steam-driven elevators, steam heat to its 200 offices and lobby, and safety in the form of fireproofing. This skyscraper was constructed as a cage of iron columns, girders and beams. Terra-cotta tiles were jacketed around all iron members. As an exterior "shield," all supporting piers and in-fill spandrels were of terra-cotta and brick. Business of all types became tenants and included attorneys, brokers, publishers, printers, and newspaper offices. Perhaps some of the most plastic exteriors in Lower Manhattan are those of the Potter Building. Pediments, pilasters, columns, urns, foliate carvings, finials, and chimneys are of deep red colored brick and terra-cotta. These reside on multiple planes giving the day's shadows top billing. Cast iron corner columns, painted black, also contribute to these motion-filled walls.

Here is an ancient building, whose walls are as energized as when new, that has served countless tenants, and has retained its history and architectural richness. The Potter Building is one of those skyscrapers that rate as timeless.

*The main shapes arise!
Shapes of Democracy total, result of centuries,
Shapes ever projecting other shapes,
Shapes of turbulent cities,
Shapes of the friends and home-givers of the whole earth,
Shapes bracing the earth and braced with the whole earth.⁴⁹*



(53) The Produce Exchange Building was the pride of New York. Harper's New Monthly Magazine. Vol. LXXIII. July, 1886, "The New York Produce Exchange", p. 193.

New York Produce Exchange Building

New York City

George B. Post, New York City
1884

This was one of the most splendid structures erected in New York City - ever. It was a building of shapes, of shapes that projected other shapes. The New York Produce Exchange was a colossal building that architecturally resembled an Italian Renaissance palazzo, complete with a campanile. It was a special shape, a shape of democracy and it was the result of a very turbulent city. Its parti was a block with an adjacent tower, and it was this tower that distinctly categorizes the Exchange a skyscraper.

The New York Produce Exchange once stood at Number Two Broadway, and it was completed simultaneously with the Washington Building across the street at Number One Broadway; both were designed by George B. Post. Here were two very different parcels with very different programs, and, where each building was executed in a very different style. Indeed, this area was visited upon by two giant skyscrapers, one not ordi-

narily considered a masterpiece and yet it stands, and the other, a recognized masterpiece that was demolished. Here Post was given the opportunity to create a two building "gateway" to Broadway, to that promenade that marches through Manhattan. And here Post replied with two red-walled skyscrapers, truly, an urban tour de force.

The New York Produce Exchange deemed it necessary to construct a new headquarters building and thus established a committee to seek out architectural proposals. George B. Post was selected as architect and the process was quick to begin. On May 1, 1881, construction began on what was to become one of New York City biggest and tallest office buildings.

The Produce Exchange Building was carried on a complete frame of cast iron columns, wrought iron beams, and joists. Here were the makings of skeletal framing, and yet, the building's structure included 12-inch thick brick buttresses into which peripheral columns were imbedded, and of which, took much of the wall and outer floor loads. Cage construction held sway here while full skeletal construction waited in the wings. Its entrance into Manhattan would be inevitable, but not with the Produce Exchange.

The oddly shaped block bounded by Whitehall, Beaver, Stone, New and Marketfield Streets became the focus of the city. Here were first employed the excavation crews, then the foundation crews who drove 15,037 New England pine and spruce piles through the soil to their bearing levels, approximately thirty-five feet. On June 6, 1882 the building's cornerstone, with the word "Equity" etched in bronze, was laid with much fanfare, and before long the building began to take shape. On May 1, 1884 the building was completed, and May 6, 1884 saw the grand opening of landmark structure.

The measurements of the New York Produce Exchange Building were impressive indeed. The structure measured 150 by 300 feet. It stood nine stories, 116 feet to the top of the coping. The great tower, or campanile, reached fourteen stories, 225 feet tall. A flagpole, measuring eighty-one feet tall was mounted above and carried a flag said to be the largest ever made at twenty by fifty feet! The tower also sported a four-faced clock, where each face measured twelve feet in diameter and weighed 1,500 pounds. The exterior of the building was laid up with dark-red Philadelphia pressed brick, red granite, and red terra-cotta. Incidentally, this is only the second skyscraper in New York City to use architectural terra-cotta on its exterior, the first being the Morse Building (Silliman & Farnsworth, 1879). Adding architectural interest to its exterior were terra-cotta medallions located on the spandrels between arches at its fifth floor; depicted were cows, pigs, corncobs, and Viking ships (the bows "sailed" out to the viewers).

Total cost of the building was \$3.2 million. Over twelve million bricks were used in its construction, as well as fifteen miles of iron girders, almost two miles of columns, 2,061 tons of terra-cotta, seven-and-one-half acres of flooring, more than 2,000 windows, nearly 1,000 doors, seven-and-one-half miles of sash cords and chains, over forty-seven tons of sash weights, one-fifth acre of skylight over the exchange room, twenty-nine miles of steam pipes, and nearly a mile of paneled wainscoting. In its aggregate it weighed 50,000 tons. Furthermore, its nine hydraulic elevators carried an average of 21,500 people daily or six-and-one-half million every year. The building's hydraulic pumping capacity was sufficient to supply water to a city of 175,000 inhabitants. Two thousand tons of coal was burned annually. Its 190 offices, reserved for members of the exchange, rented at \$180,000 per year.

The New York Produce Exchange Building housed the offices of dozens of produce merchants, the Produce Exchange Bank, a branch of the United States Post Office, the Western Union Telegraph Company, the Pennsylvania Railroad Company, and the Maritime Exchange. Nine Otis elevators, located in two banks, served all the floors. But without question, it was the Exchange Room, on the second floor that was the focus of the entire enterprise. The cavernous space measured 220 feet by 144 feet, and it rose forty-eight feet to the ceiling, sixty feet to the giant skylight above. The Exchange boasted that the floor's 31,680 square feet could accommodate 7,000 men at one time. This space was scattered with tables upon which samples of barley, wheat, oats, corn, and feed were placed for examination. Trading pits were arranged nearby. In the basement were the offices of the New York Produce Exchange Safe Deposit and Storage Company. Here were the money vaults, which contained 1,300 safes.

In all, the New York Produce Exchange Building was a giant among its peers. This was often considered George B. Post's best effort; an astonishing 4,000 separate drawings were required for its construction - a staggering output even for the Post firm. But despite its architectural merits, developers eyed this skyscraper's site in the 1950's. Then it happened: the announcement that a new glass-walled skyscraper will be erected on the site of the Exchange and that it will be completed by 1959. Its architect was listed as Emery Roth & Sons, and demolition of the New York Produce Exchange Building became imminent. Then... it happened.

Washington Building

New York City

Edward H. Kendall, New York City
1884

When completed, Kendall's Washington Building held the esteemed title of the second tallest building in the city, only Hunt's New York Tribune Building was taller - by two feet. The Washington stood thirteen floors high and it reached 258 feet into the air. It was a magnificent sight from the New York Harbor with its flagpoles bedecked, its "lighthouse" perched above, and its red brick and terra-cotta walls simmering in the sun.

The Washington Building, at Number One Broadway, stands at the very beginning of that fabled and famous thoroughfare that winds through Manhattan. Since the time of Dutch ownership to the present, this plat of ground has only been occupied by three structures: a little Dutch tavern, the Kennedy House from 1760 till 1882, and now the Washington Building. The skyscraper's name is derived from the belief that General George Washington is said to have established a command post at this site during the Revolutionary War.

Cyrus West Field (1819-1892) was the man most responsible for the erection of the Washington Building. He is noted for laying the first fully successful transatlantic communication cable in 1866, that is, after four attempts. Nonetheless, he promoted the use of his accomplishment and continued as a successful businessman, when in 1882, he decided to invest, with others, in the erection of a grand new skyscraper at the Battery.



(54) The Washington Building still overlooks Battery Park but without its salt shaker top. The tower of the Produce Exchange looms in the background.

The block bounded by Battery Place, Greenwich Street and Broadway was quickly relieved of its buildings in 1882. The site was soon the focus of much attention as this was one of the greatest structures to rise in New York City during the 1880's. Crowds gathered to watch the great skyscraper climb into the air and take command of the Battery. People observed first hand the construction methods associated with cage construction, whereas an iron frame underlies the exterior wrap but its walls are still self-supporting. They saw how the building formed a C shape with a large "court" opening to the north. Elevators, still a bewildering invention to some, were installed in two banks and totaled six. They marveled at the building's profuse decoration, it was a delightful explosion of every sort of Queen Anne contrivance: walls of smooth stone abutted, and contrasted with, rusticated stone, a three-story mansard roof with forty-three gable windows was topped by iron cresting. Pilasters, garlands, terra-cotta foliate panels, and grotesques vied for attention. Twelve oriel windows provided a great diversion as no other skyscraper yet included them. Still, the piece de resistance was also the building's grand finale, an eight-sided cupola perched upon a steeply pitched base, which in-turn rested upon the roof. Here a circular deck wrapped the "lighthouse" from where visitors could oversee America's busiest harbor and the ocean beyond.

In all, three years were devoted to this skyscraper project. Upon its opening, the office building quickly filled with prominent steamship lines, trading merchants, and various maritime concerns. Here too, was the home for the Postal Telegraph-Cable Company previous to the completion of its own thirteen-story office building in 1894.

In 1919, the owners of the Washington Building, the original promoters having long-since died, felt that a renovation was due. In 1921, after two years of work and with plans drawn by Walter B. Chambers, the transformation was complete. The result was a tragedy. Every element that made this early skyscraper a landmark and favorite with the people was eliminated. Gone were the robust facades, the oriel windows, and the rooftop tower - its unmistakable exclamation point. Only a sad vestige of the three-story, gable-peppered mansard roof remained. The building's name was also sacrificed; the structure was then called the International Mercantile Marine Building, then later, the United States - Panama Pacific Lines Building. Today, it is simply known as Number One Broadway.

The Home Insurance Building represented the decisive step in the evolution of iron and steel framing, and a century of experiment and practical achievement lay behind its creation.⁵⁰

When it comes down to a matter of priority there is absolutely no first "skeleton frame," as we know it, in the world...However, it may be set down with a fair amount of assurance that the structure of the original Home Insurance Building had very little or nothing in common with the modern skeleton construction and had little or no influence on "Skyscraper" design.⁵¹

...it was Jenney who stumbled upon it in his Home Insurance Building. The great discovery is of course skeleton construction.⁵²

Home Insurance Building

Chicago

William Le Baron Jenney, Chicago

1885

No nineteenth-century skyscraper caused more controversy than did Chicago's Home Insurance Building. Many claimed that it was the America's *first* skyscraper, others, of course, disagreed. Much depended upon whom you asked and much depended upon where they were from. Chicagoans had their candidate, New Yorkers had theirs. The Home Insurance Company had no intention whatsoever of erecting a building that would have stirred the passions of architects, engineers, and historians in the manner it did; what the Company wanted was ample office space.

Founded in 1853 in New York City, the Home Insurance Company was seeking westward expansion in order to offer its services to new clients - Chicagoans. Real estate developer, Edward C. Waller (1845-1931), headed a syndicate of investors that paved the way for the construction of what was to become the Home Insurance Building. After a parcel of land became available on the northeast corner of LaSalle and Adams Streets, Waller and his business consortium acquired it. A nationwide competition was sponsored by the Company to select the best building design for its Chicago headquarters. An ad hoc committee within the Manhattan-based Company chose architect William LeBaron Jenney's entry from a field of entrants.⁵³ A building permit from the City of Chicago was issued on March 1st, 1884, and construction began that very day.

The Home Insurance Building's foundation became a major structural issue due to Chicago's spongy earth. Constructed was a foundation composed of isolated footings on beds of concrete; these "beds" were laced with steel rails so that the entire "piece" would

act as a monolithic whole. The engineers anticipated some settling and placed the building four inches higher than what would have been usual practice; the building did eventually settle four inches downward. A major portion of the total building load was carried on granite piers and load bearing brick walls: The walls of the lower two stories are made of one course of granite blocks. The foundations are heavy, and the brick walls of the superstructure are very thick.⁵⁴



(55) Chicago's celebrated Home Insurance Building before two floors were added. Chicago Historical Society.

Cast iron columns and rolled iron beams formed the framework up to the sixth floor, whereupon *steel* beams, the first rolled in America by the Carnegie Steel Company, formed the framework for floors seven through ten. This was profoundly significant; here stood the first skyscraper that employed structural *steel* members – not throughout – but just enough to become an antecedent of the *modern* skyscraper. In addition, the Home Insurance Building employed steel shelf angles (connected to *steel* spandrel beams) to support the outer walls of brick and glass – the curtain wall; the majority – *not 100%* – of

the exterior walls were "carried" in this fashion. This, too, was a profound accomplishment, all-important in the history of the "skyscraper."

Its altitude was not sufficiently potent to cause scuffles in the worlds of architecture and engineering. What did cause consternation was the manner by which the subject building stood. To some a "skyscraper" had to feature a metal skeleton – iron or steel – with no load bearing walls. Others insisted a combination of a metal skeleton with load bearing walls, if tall enough, made a "skyscraper." How tall is tall? Some definitions forwarded by the architectural elite named the Home Insurance Building the "world's first skyscraper." Others, probably just as "elite," carefully drew attributes that excluded the Home Insurance, naming instead another building entirely. Controversy reigned.

The Home Insurance Building – at the time of its completion in 1885 – ranked as America's fourteenth tallest building. This position was shared by thirteen other contenders, all tied at ten stories for *fourteenth place!*⁵⁵ To some, then, those taller buildings, perhaps by virtue of their lack of a complete metal skeleton, would too, be instantly disqualified from this "skyscraper tourney." In fact, by that stringent rule (a full metal skeleton is a requirement for skyscraper status), even the Home Insurance Building would have to be disqualified; it did not have a *complete* skeleton of metal and it did not, *comprehensively*, possess curtain walls. The Home Insurance Building was a structural hybrid that officially stood ten stories tall, 156 feet above the LaSalle Street sidewalk.⁵⁶

Its appearance was rather commonplace. It was broad-shouldered, symmetrical, and it cost \$800,000 to erect. The Home Insurance Building measured ninety-seven feet on Adams and 140 feet on LaSalle. Its first two floors were laid up with granite, its walls above were buff-colored brick and tan terra-cotta. Overall, it was a layered box with overwhelming horizontally. Segmental-arched openings executed in gray granite marked the first floor windows and entrances. Overall detailing, including Corinthian capitals and a rooftop railing appeared purely arbitrary. The LaSalle Street entrance was flanked by two pairs of single-piece granite columns and topped with a granite-trimmed balcony. Regarding its exterior, the architectural historian Carl W. Condit observed, "By any standard the architectural quality of the Home Insurance can hardly be judged a success."

Inside the Home Insurance Building were 235 offices, four passenger elevators that served a business-day population of 1,250, many of which were commodity brokers, lawyers, bankers, and of course insurance agents and their support staffs. Its 200,000 rentable square feet were sumptuous throughout. The building's corridors were wainscoted with "Italian marble of the finest vein...beautifully matched and polished." The main lobby featured two grand, white marble, staircases which ascended to a mezzanine level. The lobby, with its double-height space, was described as possessing "peerless beauty – a veritable marble hall and a portal such as no palace in Europe can boast of." At the mezzanine level were located two cavernous rooms; to the south were the offices of the Union National Bank and to the north were the world headquarters and "counting house" of meatpacker Armour & Company:

This is one immense office – taking in the entire floor space of the north wing of the building...There must be three hundred employees [sic] of all grades here, the majority of whom are writing at little desks arranged in a manner suggestive of the school-room. A great many of those who are not writing are managers of departments, and these are talking business to callers. And there is a perfect procession of callers. You can not see anybody unless you are announced by your

men standing near the door. They call the person you want to see. The person you want to see has other callers and you must wait. The central figure in the great room, of course, is Mr. P. D. Armour. He sits at a table-desk to the left, and may be engaged in looking over a newspaper, or in conversation with a visitor or one of his department managers. Whatever he is doing he has a pleasant, benevolent, kindly expression on his face, and his face is the index to his character. The name of Armour & Co. is familiar to the people of all countries. It is interesting to notice with what a perfect system the establishment is conducted.⁵⁷

Occupying nearly the entire tenth floor were located the offices of the Northwestern Masonic Aid Association of Chicago, the "largest insurance company in Illinois, and the second largest similar organization in the world." The skyscraper's namesake, the Home Insurance Company, occupied a number of offices on the building's middle floors with smaller tenants sprinkled throughout.

After standing a quarter-century, the Home Insurance Building was characterized thusly: "No longer a skyscraper in the modern acceptance of the term, this structure still is of sufficient altitude to attract attention."⁵⁸ Was this still a "skyscraper?" Of course. Did it still attract attention? Certainly, but not the type it did when new. By the late 1920's the Home Insurance Building mostly attracted the attention of real estate developers, land speculators, and large corporations looking to grow in the fertile soil of the LaSalle Street canyon; maximizing profit meant maximizing the earning power of each parcel of land. Skyscrapers were taller now, far taller than predicted in 1885; by 1930, New York's just-completed Chrysler Building was more than *seven times* the height of the old Home Insurance Building. Change would come to the northeast corner of LaSalle and Adams Streets.

Something known as the Field Estate doomed the Home Insurance Building. The Field Estate was the entity that purchased and eventually developed the site of the celebrated skyscraper that occupied the northeast corner of LaSalle and Adams Streets. That location was one-fourth of what many considered Chicago's "power corner." Being only ten floors and forty-six years old condemned the building in the eyes of the real estate power brokers. Certainly something much taller and much more modern would better suit all parties concerned, i.e. investors, corporate clients, and the Chicago tax assessor. In usual fashion, the building was vacated and the sidewalks closed. What happened next was urban vandalism of the worst kind, and soon the Home Insurance Building was no more. The year was 1931.

Insurance Exchange Building

Chicago

Burnham and Root, Chicago

1885

Chicago's Insurance Exchange Building was just one of a stellar group of early skyscrapers that centered around the newly opened Board of Trade Building and stood shoulder-to-shoulder along South LaSalle Street. The still-emerging business canyon was already lined with such notables as the Rookery and the Home Insurance, while many more were being drawn. The Insurance Exchange was the home to two major banks, one of which was the Continental National – the bank after whom the building was latter named. Four hundred tenants occupied the building, most being involved in law, finance, and commodity trading. Three passenger elevators, present at its opening -

not added later, busily serviced tenants and clients making thousands of trips each business day.



(56) Chicago's Insurance Exchange Building of 1885 was a superior architectural composition. This pioneer skyscraper was demolished after only twenty-seven years.

The Insurance Exchange's architectural style is neo-Romanesque and recalls the design of the Rookery which it faced directly across LaSalle Street; a healthy dose of both harmony and contrast must have existed when these were new. The Rookery, dark and brooding, and the Insurance Exchange standing in a glorious autumn-leaf red, must have proved arresting - yet pleasing to the eye. The ten-story building, costing \$450,000 to construct, measured 165 feet along LaSalle and sixty feet along Adams Street. Structurally, this skyscraper employed some load-bearing walls in combination with an iron and steel skeleton. This was no block-buster, but rather a demure building, a polite skyscraper that gently met the street and subtly tickled the sky with its two corner bartizans. Its red brick facades were skillfully composed of solids and voids, terra-cotta string-courses, and deeply inset arched windows. Visitors to the Insurance Exchange, if entering via its main entrance on LaSalle, passed beneath a two-story-tall stone arch, a delightful architectural experience. But in 1912, all experiences with the building ceased; the Insurance Exchange was demolished in order to build a much taller and bulkier skyscraper.

Studebaker Building

Chicago

Solon Spencer Beman, Chicago

1885

South Bend, Indiana was the home to the Studebaker Brothers Manufacturing Company, a firm organized in 1868 to build carriages and wagons. Studebaker, owned by five brothers, eventually became the largest wagon manufacturer in America, and by 1902, the firm made its first electric-power cars. This young and dynamic company came to realize the opportunities Chicago presented, what with its large population and substantial base of wealth. The promotion of Studebaker products there would prove to be invaluable, so in 1883 the brothers sought to purchase land for a building in a high visibility location. They soon found it, a mid-block site on Michigan Avenue measuring 107 feet by 170 feet deep, a plot that would be completely occupied by their "advertisement."

(57) Solon Spencer Beman (1853-1914). Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 880.





(58) A stone impost at the entrance of the Studebaker Building was carved in the Romanesque manner.
Photo by author.

The Studebakers hired the prolific architect, Solon Spencer Beman, to design a structure that would bear their name and promote their products. Beman handled this design problem in a direct manner employing large walls of glass for the building's front façade so that any size or type carriage could be showcased in the finest and least obscuring way. The design was finalized and construction commenced in 1884 on the \$750,000 skyscraper known as the Studebaker Building.

Upon completion, the neo-Romanesque Studebaker Building rose eight floors, 135 feet high. It was a masonry structure complete with load-bearing walls throughout. This fact was not obscured, but rather celebrated, on its main façade; the skillful manipulation of masonry and glass provided for a lively composition - but in every way the materials expressed themselves honestly. Large rusticated blocks of limestone on upper floors, and red granite for the lower floors, supported themselves and the floors inside. Oversize windows were spanned with lengthy limestone blocks, a superb feat of engineering and craftsmanship. Arches, too, played their role to perfection dancing across the façade and resisting gravity and the wind. In all, there is a dynamic play of rough versus smooth, hewn stone and polished glass. Two granite columns, vertically tying floors three and four, measure twelve-feet-ten-inches tall by three-feet-eight-inches in diameter. They are said to be "the largest polished monolithic shafts in the country."⁵⁹

Internally, the spaces were planned for maximum exposure of Studebaker products. The first and second floors were very transparent - some sixty percent glass - and functioned as a showroom, not unlike today's auto showrooms. Here the various wagons and carriages could be inspected from the outside before committing to a purchase. Floors three and four were open to the public for more and closer inspection of Studebaker products. The fifth floor and above were reserved for manufacturing and parts storage.

Despite careful planning during the early stages of design, the Studebaker Brothers Manufacturing Company was, by 1894, quickly running out of space at its Michigan Avenue location. Beman was called on again to design a larger structure immediately to the

west, to the rear, of its Michigan Avenue offices and showrooms. In 1895, Studebaker's new ten-story skyscraper was completed and the result was nothing less than exquisite. Gone were the Romanesque overtones – now replaced with diminutive Gothic decoration – in exchange for massive walls of glass. On June 1, 1896, Studebaker left its home of only eleven years for the new building on Wabash Street.

Also in 1896, the original Studebaker Building was sold and renamed the Fine Arts Building. New owners' remodeling included the removal of the roof, attic, and façade of the eighth floor in return for an addition of three more floors. Now, rather than carriages and wagons, the floors were filled with art and music studios, theaters, music halls, shops and offices. The building's proximity had everything to do with its new function, as it stood adjacent to the Auditorium Building and close to the locations of other cultural institutions. Despite the years and changes of downtown Chicago these two buildings still stand, a remarkable feat in this constantly evolving city.

Pullman Building

Chicago

Solon Spencer Beman, Chicago

1885

George Mortimore Pullman (1831-1897) was an American inventor and businessman. Born in Brocton, New York, he relocated to Chicago in 1855 to embark upon a career. In 1858, he remodeled two coach railroad cars into "sleeping cars" for passenger use on lengthy trips. In 1867, just following the Civil War, Pullman founded the Pullman Palace Car Company which produced sleeping cars for all major railways. The next year he designed, manufactured, and marketed the "dining car" to eager railroad operators nationwide. Pullman had his career.

In 1884 a parcel of land became available on the southwest corner of Michigan Avenue and Adams Street, immediately east of Chicago's central business district and overlooking Lake Michigan. Pullman purchased it and commenced to spend \$800,000 on construction of a skyscraper that would bear his name and house his company's offices. Upon completion in 1885, the Pullman Building would reveal to Chicago that it was unique, there. It was a truly *mixed-use* skyscraper that housed 125 office suites and seventy-five apartments too. Commercial and retail spaces existed on the first floor while the ninth floor housed a gourmet restaurant, appropriately named the Tip Top Inn. Four passenger elevators served the building whisking diners, tourists, office tenants, apartment renters, and the owner himself from lobby to the upper floors of the great Pullman Building. This *multi-purpose* skyscraper set precedent for Chicago, evidenced today by the two-mile stretch of North Michigan Avenue packed with mixed-use towers that culminate in the 100-story John Hancock Center (Skidmore, Owings and Merrill, 1968).

The Pullman Building was an early architectural powerhouse with ample romance and spunk; its design was influenced by both the neo-Romanesque and Queen Anne styles. It measured 169 feet along Adams Street and 120 feet long Michigan Avenue. In plan it was a U shaped building, its east and west wings separated by a delightful courtyard entered from Adams Street. This early skyscraper stood ten floors, 125 feet to the roof, 162 feet to the top of the corner tower. The Pullman Building was a steel skeleton structure that was faced by red granite, red brick, and red terra-cotta. The Pullman's façade was a lively mix of Roman, segmented, and Tudor arches. Its rusticated first and second floors appeared bastion-like and recall the muscular stonework of an English battery. Its roof-

line was punctured repeatedly by pyramidal roof caps, dormer windows, chimney stacks, and domed towers.

Pullman Building, Chicago.



(59) Pullman Building

George Pullman's office was located on the ninth floor, just below the flag-pole-topped corner turret. The offices of the Pullman Palace Car Company were located elsewhere in the building. Despite its notoriety, and a long and popular history, the Pullman Building could not escape its final and tragic destiny, its demolition. This trailblazer, one of the first Chicago skyscrapers to face Lake Michigan, to consciously orient itself to nature, was destroyed in 1956.

The Rookery is John Root at his very best. An improvisation in tones and harmonies both delicate and strong, spontaneity of expression with profundity of thought, all fashioned with the inspiration of genius.⁶⁰

There is not a commercial structure in the world that compares with it [the Rookery] in size, in elegance or in convenience.⁶¹

Rookery \ ruk-e-re\ n,pl-eries 1a: the nests or breeding place of a colony of rooks; also: a colony of such birds or mammals⁶²

Rookery Building

Chicago

Burnham and Root, Chicago

1886

Chicago's Rookery Building is one of America's great business temples. It is a building with a dark face and darker openings, a castle with a surprise: a jewel box occupies its center and shelters its most valuable commodity – a cube of space.

After the Chicago Fire of 1871 the site of the Rookery Building was occupied by a temporary city hall, public library, and a large water tank. These structures quickly became, for some unknown reason, the roosting place-or rookery-for a "large population" of pigeons and sundry other birds and varmints. The moniker "rookery" was applied to this assemblage, and it became so ingrained in the psyche of Chicagoans that even after their destruction the name remained tethered to this parcel. Boston financier Peter Brooks (1831-1920), along with other Chicago investors, controlled the site and were accustomed to buildings being named after Indian tribes, mountains, and politicians. But being aware of the former association of this location, Brooks decided to continue in the site's "tradition" and name the development after those proverbial pigeons and their roost-the *Rookery Building*.

This pioneering skyscraper, borne in the mind of architect John Wellborn Root, captured the imagination of Chicago, and at its completion it was hailed as a triumph, an architectural masterpiece. And it was big, too. The Rookery measured 170 feet along Adams Street, and 180 feet on La Salle. It stood 165 feet tall and in shape it was close to a perfect cube. Construction lasted two years and it cost Brooks and his partners-a trust-\$1.5 million to build. The Rookery stood eleven stories tall-one of the highest in the city. Inside there were 600 offices staffed by a daily population of 5,000. Ten passenger elevators ferried some 22,000 people each business day. The trust was pleased-full occupancy and handsome profits. Due to its proximity to the Chicago Board of Trade and many banks, the tenant mix was heavily weighted in the lucrative professions of banking, commodity trading, real estate, and law. This was no ordinary speculative office building, the Rookery was special. Its architecture recalls the Romanesque style, that which appeared during the European tenth century. The Rookery's main façade is symmetrical and topped with tourelles-diminutive towers often found on castles. Its parapet wall is embellished with abstract foliate designs, interlocking ribbons, and swags. Roman-arched window openings mark this skyscraper's seventh and tenth floors, while a prim balcony glides out from the eighth. Brick walls with terra-cotta trimmings, all beaming a reddish tan, complete the ensemble. A rough-hewn granite arch embraces the building's main doorways, four portals that do not scream "enter here" but, instead, whisper "you have arrived."



(60) The Rookery Building remains the grand lady of LaSalle Street.



(61) A close examination of this stone pile reveals an expertly cut and positioned red granite corner – the triumph of an unnamed mason. The history of man is in these stones. Photo by author.



(62) Carved granite impost blocks featuring two comical birds – rooks; they are forever talking about events on the street. It was in this "bird building," on the eleventh floor's southeast corner, that Burnham and Root had their offices. Photo by author.



(63) Daniel Hudson Burnham (1846-1912). This dapper gentleman was the most prolific skyscraper designer of the nineteenth century. Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 872.

(64) John Wellborn Root (1850-1891). Chicago Historical Society, Max Platz photographer, ICHI-30622.





(65) John Wellborn Root died in 1891 at the age of forty-one after contracting pneumonia. Colleagues Charles B. Atwood and Jules Wegman designed Root's monument, a Scottish red granite monolith featuring surfaces carved with Celtic-inspired designs. Included is a low relief carved panel depicting Root's eleven-story Phoenix Building (1886), one of the architect's particular favorites.

Root's grave, in Chicago's Graceland Cemetery, lies eight feet from the monument and is marked by a simple matching granite block adorned with a Celtic motif. The Celtic designs here echo those found so prominently displayed on Root's greatest achievement, the Rookery Building. Photo by author.

John Wellborn Root
Born A.D. 1850 Died A.D. 1891

Architect Root won over the hearts of Chicagoans with his design of the Rookery's interior, too. The entry lobby and adjacent elevator lobby were adorned with carvings of birds. The polished brass elevator doors and brass surrounds were equally treated. As one progressed further into the building the great atrium came into view. Awesome! The interior courtyard is of skeleton construction, a spider web of iron girders supporting an acre of glass, pure poetry, the whole of it a masterwork.⁶³ Here you will find no gratuitous trees, performance stage, fast food court, or piped-in music. No such suburban trappings here, just a tranquil space, proud, and old.

The Rookery's original 600 offices (it is doubtful there are still that many) were constructed with the finest materials. All public corridors and office hallways were wain-

scooted with the finest Italian marble and trimmed with the handsomest hardwoods. Electric lighting was provided to each tenant and the mosaic work in the offices and public areas was judged "superb."

The Rookery is supported by a grillage foundation, a waffled "screen" of steel rails anchored inside a thick mat of concrete. It is of "cage" construction having iron columns, girders, and beams that carry the structure's internal loads in tandem with some load bearing walls. The first and second floor facades along Quincy Street offer some of the finest examples of nineteenth century curtain wall construction-anywhere. All office walls above the inner court (floors four to eleven) show evidence of a full iron skeleton; glazed white brick, iron, and glass form these pioneering curtain walls. Both street facades stand by virtue of traditional masonry and bear their share of the building's weight.



(66) This section of the Rookery's alley wall, actually Quincy Street, is the architectural antithesis of the La-Salle Street façade. Some seventy-five percent of this section is glass embraced by iron trim. Photo by author.

Looking at the Rookery Building today is the equivalent of looking back in time. Although the building was recently restored, there is enough of Chicago's gritty, rough-and-tumble history visible on its face; its walls speak the truth and say, "*The Rookery is Chicago.*" It is this city at its very best, the building as gladiator, as survivor that stood the test of time. While scores of Chicago landmarks tumbled down, the Rookery and its storied past remained. It will probably outlive countless, but lesser, buildings and more descendants of those earlier feathered friends.

Kansas City Board of Trade Building

Kansas City

John Wellborn Root, Chicago

1888

By the end of the nineteenth century, Kansas City, Missouri boasted vibrant grain, stock-yard, meat packing, and flour milling industries. Kansas City was built by the railroads, and by 1890 it had a population of 132,716. This urban center was large enough to support a regional market in commodities, and it was certainly large enough to erect a skyscraper.

A design competition, sponsored by the Kansas City Board of Trade, enticed fifty-five firms and individuals to submit plans for their new headquarters. Some of those respondents were none other than Peabody & Stearns of Boston, George B. Post of New York City, and John Wellborn Root of Chicago. The nod went to Root who then gave to this city a masterpiece.

After two years of construction the Kansas City Board of Trade Building was completed. The building's parti is a simple one: four major components, clearly defined, signaled interior functions. In the accompanying view, the mass to the left housed the trading room. It contained a triple-height space with giant windows. The opposite mass was for office and clerical functions. The tall tower to the rear housed the building's four elevators. The fourth component was a low-rise, glass and steel membrane that bound the others together, the lobby.

The twelve-story Board of Trade had a superb interior. The trading room's floor measured fifty-nine by 115 feet. Its barrel vaulted ceiling rose some fifty feet, and this room like the entire building, was finely appointed.

John Wellborn Root treated the Board of Trade's exterior in a plastic and masterful manner. Red stone, brick and terra-cotta were "formed" by him as he contrasted crisp corners with rounded corners, and expressed arches and columns not as structural devices but as screens separating inside from out. A balcony outside of the trading room was interpreted on the exterior of the office mass as a terra-cotta belt course. The building's multiple masses required multiple roofs and, in silhouette, suggested a city skyline. The Board of Trade's main entrance was clearly marked by a prominent arch, an arch that signaled entry into Root's idiosyncratic response to this architectural problem.

In 1968, this early skyscraper was shamefully pulled down.

Powers Building

Rochester

Warner and Brockett, Rochester

1888

In the heart of downtown Rochester still stands one of America's great pioneering skyscrapers, the Powers Building. Daniel W. Powers (1818-1897), banker, real estate investor and noted patron of the arts, commissioned this structure as a headquarters for his

prominent banking house. Rochester architects Andrew Jackson Warner and William Brockett responded with a design that would ultimately become Rochester's tallest office building.



(67) Powers Building

The original Powers Building, completed just after the Civil War, was billed as the first fireproof building in New York State outside of New York City. It stood five floors, was faced with cast iron, and resembled a Renaissance palazzo. The Powers *Block*, as it was first known, was also fitted with one water-ballast passenger elevator.

By 1888 a rivalry ensued. The eleven-story, 170-foot tall Wilder Building, designed also by Warner and Brockett, rose across Main Street from the Powers. The Wilder then stood as Rochester's tallest building. But, not content with being outdone, Powers decided he was entitled to own the city's tallest skyscraper. In response, Daniel W. Powers had a giant three-story mansard roof cap the original five-floor office block. In addition, Powers expanded outward from the original "cast-iron box" to provide for more leasable space. Furthermore, he added a five-story, balcony-wrapped Renaissance-inspired tower. By 1891 the Powers stood at thirteen floors, 175 feet - wresting the title away from the Wilder and again becoming Rochester's loftiest building.

The enlarged Powers Building was faced with granite and limestone, contained indoor plumbing, and was Rochester's first office building to incorporate electrical lighting. Structurally, the Powers incorporated load bearing walls, metal cage construction, and

steel skeleton construction.

Wilder Building

Rochester

Warner and Brockett, Rochester

1888



(68) Wilder Building

Samuel Wilder, a prominent banker and real estate developer, had this remarkable early skyscraper erected as a commercial investment. The eleven-story, 170-foot tall Wilder Building briefly held the title of Rochester's tallest, that is, until the nearby Powers Building was added onto which brought that building to thirteen floors.

This Romanesque-inspired office block is faced with red brick and rusticated stone, and an abundance of red-terra cotta. An impressive stone-arch entrance, an eighth-floor arcade, and its stand-out color are its prime exterior features. Two distinctive cone-topped finials that once rose above the Wilder Building's diminutive cornice were short-lived flourishes that were removed in 1909 to the detriment of the building's design. Internally, the Wilder is supported by a steel skeleton, one of the very first of this type of construction outside of either Chicago or New York City.

Chamber of Commerce Building

Cincinnati

Henry Hobson Richardson, Brookline, Massachusetts

1888

In August 1885, Henry Hobson Richardson (1838-1886) was announced winner of a building design competition sponsored by the Cincinnati Chamber of Commerce. This Romanesque-inspired building was crowned, but unfortunately, Richardson would die some two years before its completion.

The Chamber of Commerce Building was exquisitely proportioned, and was one of America's handsomest structures. Entrances and windows were deeply inset maximizing the effect of shadow. Exterior walls were of pink Milford granite and the roof was of red tiles. The building measured 150 by 100 feet, and rose eight floors.

The inside offered a robust, yet personal, interpretation of Romanesque architecture. Needs of 19th century business dictated new approaches to form and space and the Chamber of Commerce Building epitomized those changes. Bank offices, shops, and a restaurant occupied the first floor. The second floor held a great meeting hall, 140 feet long by sixty-eight feet wide, and a whopping forty-eight feet high. The upper six floors housed offices were suspended from the roof by an elaborate scheme of iron trusses.

Richardson's biographer, Mariana Griswold Van Rensselaer insightfully wrote:

American merchants, like their far-off predecessors in Belgium and Holland, want a great and dignified hall of assemblage; but, with a keener eye to revenue, they demand that it shall be combined with an 'office building,' - that every possible foot of space shall be put to use in ways that are often quite at variance with the chief use of the building, and that as many such feet as possible shall be secured by vertical extension.⁶⁴

There was the key, the stress upon "vertical extension." The notion that a building rise tall, not be tethered to the ground, was made palpable with this Cincinnati skyscraper. This building's architect searched for, and found, the sky. Though appearing heavy and burdensome, it stretched upward despite itself; it was both Earth bound and Heaven-bound.

In many ways the Chamber of Commerce was a structure of contrasts. Rental advertisements boasted that the building's construction throughout was "entirely fireproof," yet, in 1911, the Chamber of Commerce Building was totally destroyed by fire. Within three years, the Union Central Life Insurance Building⁶⁵ stood on this site.

Drexel Building

Philadelphia

Wilson Brothers & Company, Philadelphia

1888

The Drexel Building was one of the earliest in a long line of business towers constructed in 19th century Philadelphia. This office structure housed the banking and investment

house of the Drexel Company - later, Drexel, Morgan and Company of New York - and the Philadelphia Stock Exchange. In addition, it housed over 400 business offices.

The building bears the name of the Philadelphia-born banking mogul, Joseph Wilhelm Drexel (1831-1888). In 1871, with Junius Spencer Morgan (1813-1890), the powerful securities firm of Drexel, Morgan and Company of New York was formed. This Drexel Building was its Philadelphia corporate office. Years later, its Manhattan offices would be headquartered in the now famous House of Morgan, at Wall and Broad Streets.

Standing eight stories tall, this building was indeed an early skyscraper landmark. Its construction began in April 1887, and was completed in November 1888. The floors throughout the building were made of hollow terra-cotta blocks that formed flat arches between floor beams. These were supported by steel girders and columns encased with terra-cotta for fireproofing. Despite the use of a steel framework, portions of its exterior walls were load bearing.

For tenant comfort, the Drexel Building offered both gas and electric lighting, and mechanical ventilation of all floors by means of four electrically driven fans mounted on the roof. The Drexel Building stood as two connected wings each measuring fifty-six by 220 feet. Because of this configuration, and despite its apparent *mechanical* innovations, all office workers had access to sunlight and fresh air.

The Drexel Building's exterior was marble and white enameled brick. Stylistically, it was a modern interpretation of the Italian Renaissance featuring marble columns, pediments, and arches. Despite its pomp, the Drexel was demolished in 1955.

Westinghouse Building

Pittsburgh

architect unknown

1889

George Westinghouse (1846-1914) the great American inventor, manufacturer, and eventual president of thirty corporations, including the Westinghouse Electric Company, sponsored the erection of this skyscraper. His namesake, the Westinghouse Electric Company, was founded in 1886, only three years before the completion of his downtown Pittsburgh skyscraper. This building housed the office headquarters' of his many enterprises.

The Westinghouse Building, once standing at Ninth street and Penn Avenue, was one of the first taller-than-average office buildings in Pittsburgh. It stood ten stories tall and had a stout corner tower topped by a six-sided cap. The building was faced with red brick, red stone and terra-cotta. Embedded gables, a monumental arched main entrance, and its overall massive appearance lent an almost medieval feel to this early skyscraper. The skyscraper was billed by rental agents as "absolutely fireproof." It housed three passenger elevators that reportedly could reach from lobby to tenth floor in twenty seconds.

The urban renewal programs instituted in the 1950's and designed to create what is now known as the Golden Triangle, or Pittsburgh's new downtown, were responsible for the Westinghouse Building's demise.

At No. 52 Broadway, below Wall Street, stood until recently a building of more than ordinary interest – the first successful skyscraper erected in New York (1884) [sic]. It was only eight [sic] stories high, but will tower historically higher than any building that will ever stand on the island; it demonstrated the feasibility of skeleton steel construction and caused Manhattan to develop up into the air instead of along the ground. The effect of this invention has been truly remarkable. No other development in the progress of New York begins to approach it in magnitude of the tremendous change it wrought, and of the altered conditions it created...Bradford Lee Gilbert, the architect whose genius gave to New York and the world this remarkable type of building, in telling the story to friends, said that the idea of an iron building had come to him in a dream.⁶⁶

Tower Building

New York City

Bradford Lee Gilbert, New York City

1889



(69) New York's controversial Tower Building. Museum of the City of New York

Erected in the skyscraper thicket of lower Broadway, the Tower Building was perhaps the most controversial skyscraper of the nineteenth century. It was touted as *the first New*

York skyscraper to be constructed with a metal frame - or skeleton. There were some New Yorkers who even went so far as to claim that the eleven-story Tower was "the very first skyscraper to stand by means of a skeleton of steel and, or, iron." Chicagoans were outraged. Battle lines were drawn and allegiances formed. A claim of this magnitude could hardly go unchallenged - and it did not.

John Nobel Stearns, a silk manufacturer, commissioned the Tower Building and selected Bradford Lee Gilbert architect. Stearns desired a Broadway address for his company's headquarters and by shoehorning a building into a slim site with a Broadway frontage of only twenty-one feet six inches he accomplished his goal. In plan the Tower was key-stone-shaped stretching east 108-feet to New Street. There the building's frontage ballooned to thirty-nine feet six inches. The circumstance of a tight site was ideal for a structure with a metal skeleton.

It was quite a task for architect Bradford Lee Gilbert to obtain a permit from New York's Board of Examiners. The traditionally conservative Board resisted the notion that a skyscraper could safely stand by virtue of a metal skeleton alone and not by the support of immense bearing walls.

The Stearns' site was in the oldest part of Manhattan, an area where the standard lot sizes measured twenty-five feet wide. If a developer could assemble say two or three of these, the Board reasoned, he could construct a broad-based building and eliminate the need for this "untested" metal-skeleton construction technique promoted by the architect. Certainly many New York buildings were constructed, at least in part, with the help of the modern metal frame, but until now none were erected using a metal skeleton exclusively for support. Gilbert reasoned that with conventional load bearing wall construction only a narrow corridor would have been made available to tenants on the lower floors; in essence there would be no gracious lobby or sidewalk-accessible retail establishments. Besides, the New York Produce Exchange and the Potter Building, among others, contained the necessary ingredients for strength, safety, economy and a time-tested resiliency. The architect appealed to the Board on structural, engineering, and economic grounds but when "Chicago" was tossed into the fray, and the Board's sense of civic pride was addressed, Gilbert prevailed.

Construction of the Tower Building (it could have been called the "Building Tower") began on June 27th, 1888. Though thought to be "modern" in a structural sense the building was designed recalling the storybook towers of medieval Germany or of the watchtowers of Spain and France. Supporting the building were timber piles, a steel-reinforced concrete slab, and huge granite blocks that directly shouldered the downward thrust of the iron support columns of the periphery. There were no interior columns since the span - the building's width north to south - was so narrow. Framing in the sidewalls consisted of irregularly spaced cast iron columns. Running from front to back (west to east) wrought iron girders and iron spandrel beams connected the columns and, with diagonal iron bracing, added rigidity to this skinny metal box. The side walls were almost windowless, and light was a premium in the building's core.

William H. Birkmire, the engineer in charge of the construction department of the Jackson Architectural Iron Works - the Tower's erector, further describes the construction process:

The inner column was made of cast iron 12 by 14 inches; then an air space of 2 inches and another cast iron shell $\frac{1}{4}$ inch thick. The side walls of the building were supported upon two 9 inch steel beams, which in turn rested upon cast iron brackets, cast with the columns, and further secured by bolts. The floor beams were rigidly bolted to the above wall beams and to the columns. Great heavy iron braces extending from foundations to the roof were placed in some of the partitions to add additional stiffness, which from later experience in other buildings of the same class has proven to be unnecessary.⁶⁷

On September 27th, 1889 the Tower Building was pronounced completed and was opened to a curious public. A pyramidal roof, of red-colored clay tiles, capped its eleven office floors and topped-out 129 feet above Broadway. Although surrounded by larger, taller and more celebrated rivals, the Tower Building's completion immediately caused controversy.

On August 9th, 1899 a thirty by thirty-three inch bronze tablet, mounted to the left of the Tower's impressive Broadway entrance, was unveiled to the delight of a small but enthusiastic crowd. The Society of Architectural Iron Manufacturers sponsored the event. The tablet stated that this structure, New York's Tower Building, was the first to be erected "in which the entire weight of the walls and floors is borne and transmitted to the foundation by a framework of metallic posts and beams." Furthermore, the tablet bore the name of architect Bradford Lee Gilbert as the inventor of this construction system, and New York's Jackson Architectural Iron Works as constructor.

Replies were swift and controversy was heated.

The placing of a tablet on the Tower Building, 50 Broadway, by the Society of Architectural Iron Manufacturers of New York, commemorating the erection of the earliest example of what is now known as the "skeleton construction," has stirred up much comment among leading architects of the country and caused a vigorous debate as to the actual inventor of "skeleton construction," by which the "skyscraper" has sprung up to revolutionize modern architecture in great cities.

Architects and builders in Chicago claim that the placing of this tablet on the Tower Building is an audacious attempt to steal the thunder of that city, claiming that W.L.B. Jenney of Jenney & Mundie, architects of that city, is the real inventor, having first made use of skeleton construction in building the Home Insurance structure in Chicago in 1883 and 1884. William H. Birkmire, architect and engineer of this city, upholds the claim of the Chicago architects, and says further that it was he himself who solved the problem [by solving the problem Birkmire is declaring that *he* invented skeleton construction] in the case of the Tower Building, being at that time in charge of the construction department of the Jackson Iron Works, which firm furnished the iron framework for the structure.

Bradford Lee Gilbert vigorously objected to the words of Birkmire with whom he collaborated on the Tower Building project. The "betrayal" by Birkmire is evidenced by the following:

Why the plans for the Tower Building had been drawn and passed on by the city authorities before I ever knew Mr. Birkemire in a business way. He was at that time a draughtsman for the Jackson Architectural Iron Works, and secured for them the contract to furnish the iron for the Tower Building but so far from having

anything to do with designing the building and planning the skeleton, that had all been done by me weeks and days before he was approached.

Of course there are always people in all lines of business who when something new and important is found will have something to say in dispute of the inventor's claims. This is due, perhaps to the similarity of all inventions along any one line of work. What is known as the 'cage construction' is what was engaged by the Chicago architects. In that plan there is an iron framework which supports the floors of tall buildings, outside of which are the brick walls which support only their own weight. That is entirely different from the metallic skeleton construction which was used for the first time in the erection of the Tower Building. In this plan the iron skeleton supports not only the weights of the floors but also the weight of the walls, story by story, the iron being so riveted or joined into the brick walls as to support the whole structure.⁶⁸

Soon it seemed that every architect and builder weighed in. New York architect John B. Snook claimed to have invented the skeleton system twenty years before.⁶⁹ Others made similar claims. The controversy forced most architects and builders to align with either East Coast or Midwest factions. Both of Chicago's early contenders, the Home Insurance and the Tacoma, experimented with the curtain wall but still were partially supported by masonry bearing walls. What does appear to be fact is this: New York's eleven-story Tower Building was constructed of iron *only*, and was 100% supported by its iron skeleton. Its stone walls were reduced from bearing members to those of a curtain wall.

In any event, it appears that shortly after 1889, two of America's mightiest cities raised into the air tall buildings supported entirely by means of metal skeletons thus ushering in the age of architecture without bounds, of buildings defying gravity and celebrating the *scraping of the sky*. It also is a fact that America's two mightiest cities have suffered architectural violence in the form of the demolitions of the Home Insurance, the Tacoma and the Tower Building. In 1914 the demise of the Tower Building, like the others, cleared the way for much taller structures, for buildings with steel skeletons and lofty ambitions.

*The new Chamber of Commerce building is in many respects the finest commercial structure in the world and certainly one of the grandest office buildings in the United States.*⁷⁰

Chamber of Commerce Building

Chicago

Edward Bauman and Harris Huehl, Chicago

1889

One of the most celebrated of Chicago's early skyscrapers was the Chamber of Commerce Building. It was built by the Hannah, Lay & Company at the cost of just over \$1-million, including the real estate beneath it. Put into simple terms, the Chamber of Commerce Building was a large rectangular box, thirteen stories tall, thin-walled, with a light-filled atrium in its center. The skyscraper's facades approached, and most likely surpassed, being more glass than not and served only as transparent envelopes. It was "modern" what with its first two floors devoted to retailing and restaurants, its relatively crisp appearance, and perhaps most importantly, its metal skeleton; 28,700 tons of iron and 3,300 tons of steel were bolted together to form its backbone.



(70) Chicago's Chamber of Commerce Building

The Chamber of Commerce Building, a speculative venture by Hannah, Lay & Company, took two years to construct and stood on the southeast corner of La Salle and Washington Streets (185 feet on La Salle and ninety-five on Washington). Its exterior walls of buff-colored brick and terra-cotta on the upper levels, and marble for the first two, formed handsomely executed curtain walls. These suggest a game board stood upright, with interlocking grids of rectangles and clear lines. Its pronounced piers, instead of being allowed to rise from sidewalk to cornice unencumbered, were instead repeatedly truncated, an unfortunate design decision and one that reduced the overall potency of the building's appearance. The neo-Romanesque cornice and its classically-inspired entrance colonnade played no major role in diluting the building's overall appearance; still, their inclusion appears capricious.

Architects Edward Baumann (1828-1889) and Harris W. Huehl (1862-1919) did an admirable job with the Chamber of Commerce Building's design. Baumann, a German native, studied at the Polytechnic School at Gradentz, migrated to the United States in 1850,

and settled in Chicago sometime after the Civil War to practice architecture. Huehl was born in Chicago and was in the employ of Baumann as a draftsman. After eleven years, this arrangement changed and a partnership was formed in 1889. Due to Baumann's untimely death, Harris W. Huehl single handedly brought this important commission to completion. From the day of its opening this thirteen-story, 190-foot-tall skyscraper was lauded as one of Chicago's greatest, due in large part to its *interior*.

Crowning the Chamber of Commerce Building was a bronze-trimmed skylight that measured thirty-five feet wide by 108-feet long. It was supported by iron frames and trusses and it allowed the tower's thirteen-story core to be bathed in sunlight. Corridors surrounded this almost palpable space and were cantilevered outward by iron braces anchored to recessed iron columns situated far from the atrium's edge; no views were obscured by structural columns allowing interior space to become fluid. Italian and Belgian marble was used as wainscoting throughout the building with terrazzo floors under foot. A solid mix of tenants, occupying 600 offices and served by 4,100 electric lamps, occupied the building. This was a skyscraper where, within a ten-hour period every business day, its eight elevators transported 30,000 people.

Shortly after the opening of the Chamber of Commerce Building an observer recorded the following:

The Chamber of Commerce building is a city within itself. There are more people doing business inside its walls than you will find in many prosperous towns, and the amount of business transacted here daily equals that done in some of the most pretentious communities in the country. Every branch of commerce and nearly every profession is represented here. We can spend a couple of hours here very pleasantly, strolling along the different balconies and taking observations of the multitude of people who are constantly streaming into and out of the elevator cars.⁷¹

The Chamber of Commerce Building was one of those early skyscrapers that suffered the fate of demolition, this one after only thirty-seven years.

This is truly an engineering masterpiece, and a favorite landmark of Bostonians.⁷² Its construction was financed by members of the prominent Ames family, aristocrats of Bostonian society and heirs to the family fortune; their wealth was amassed through the manufacturing of shovels and plows and the development of America's railroads.

Ames Building

Boston

Shepley, Rutan, and Coolidge, Cambridge

1889

Boston's Ames Building remains a powerful architectural expression - a poem of permanence interpreted in stone. Its design inspiration was drawn from Romanesque sources, themes grounded in tenth century France and Spain. The Ames displays no less than sixty arches of rough and smooth-hewn stone, a veritable quarry, and an unabashed masterpiece.



(71) The pride of Boston rested with the Ames Building, one of its first skyscrapers. To the left is the seven-story Sears Building (Cummings & Sears, 1868).

The architectural firm once headed by Henry Hobson Richardson (1838-1886), progenitor of the Romanesque idiom, was continued under the name of his successors, Shepley, Rutan, and Coolidge, of Cambridge, Massachusetts. Under Richardson's influence and his almost-single-handed-resurrection of early medieval styles for 19th century buildings, structures like the Ames could rise. Certainly, there were libraries, post offices, government buildings and churches in the Romanesque style, but few architects were inspired to design a *skyscraper* in the language of European monasteries. Shepley, Rutan, and Coolidge were inspired to do so, and they did. They erected the Ames Building as a masonry wall-bearing building that rose fourteen floors, 188 feet tall. Today it remains America's third tallest such building.⁷³ Walls at its base are nine feet thick, and when completed, the Ames Building stood as Boston's tallest. The firm of Shepley, Rutan and Coolidge were one of the skyscraper's first tenants and remained there until relocating in 1982.

...you will find this to be one of the most magnificent structures in the world...This building is a model in size, convenience and durability, and absolutely fireproof.⁷⁴

In 1889, the skyscraper evolved into a form the fundamentals of which have come down unchanged in high-building practice. In that year Burnham & Root designed and built the Rand-McNally [sic] Building, the first skeleton structure of rolled-steel beams and columns built up of standard bridge-steel shapes and riveted together.⁷⁵

Rand McNally Building

Chicago

Burnham & Root, Chicago

1889



(72) Rand McNally Building. Chicago Historic Society.

The long-vanished Rand McNally Building was hailed as one of the grandest business buildings of the age and the very first *all-steel frame* skyscraper. It ranked as one of Chi-

cago's largest office buildings, a beehive of activity in the heart of the financial district – located adjacent to the Insurance Exchange and only sixty feet from La Salle Street. Inside were 300 offices, seven acres of floor space that housed the headquarters of many important concerns like the headquarters of the Chicago, Milwaukee & St. Paul Railway Company. The building was also home to sixteen retail stores and was the destination of thousands each business day. It was also home to the Rand McNally Company and its 900 employees.

Rand McNally & Company began as a small printing shop in Chicago in 1856. William H. Rand and Andrew McNally produced guidebooks and directories, and before long began printing railway tickets and schedules eventually leading to the production of maps. By the 1880's, at about the time its home office was being completed, the company began publishing atlases, first of the United States and Canada, then of the world. From rather humble beginnings Rand McNally & Company would eventually become the largest commercial map maker anywhere.

The Rand McNally Building stood ten stories, 148 feet tall. In plan the skyscraper measured 150 feet along Adams Street and was 166 feet deep, south to Quincy Street. In its center was a delightful light court that measured sixty by sixty-six feet; Its corners were slightly chamfered, making it eight-sided, and it was topped by an iron and glass skylight. The court was ringed by private offices and a double loaded corridor. Six passenger elevators served the building.

Structurally, the Rand McNally Building was of cage construction. Its one masonry party wall prevented it from being a fully all-steel frame *support* structure, but its Adams Street – main street façade – was a mature curtain wall. Steel was extensively used throughout the building: the roof structure included twelve miles of fifteen-inch steel beams and channels and 2 ½ miles of steel ties and angles. There were employed seven miles of tie rods, ten miles of Z steel columns, twelve miles of steam pipes, and 350,000 rivets and bolts. Its hardwood floor boards, if laid on end, would stretch 250 miles. A total of 3,700 tons of steel were used throughout the building: 1,000 tons for the foundation, 2,000 tons for beams, and 700 tons for columns. The skyscraper stood atop a massive spread foundation consisting of a thick concrete floor laced with fifteen miles of steel rails and twelve-inch and twenty-inch steel beams embedded within.

The building's external envelope consisted of dark red-colored terra-cotta and glass. Terra-cotta was previously employed as a decorative device, stringcourses, busts, cornices, embellishments of all types – but here it supplanted brick and stone as enclosure. Terra-cotta spandrels and columns were almost delicate in their handling and proportions, yet the primary element of the Rand McNally's main facade was its many large windows. The Rand McNally Building was not the first to employ terra-cotta as a complete exterior wrap, that technique was pioneered by New York's eleven-story Potter Building (Nathan G. Starkweather, 1883), but its application was handsomely and effectively executed.

This riveted steel box called the Rand McNally Building was a pioneer in a new type of construction, the used of steel. True, it was not a stand-alone steel skeleton, but the principals were there and masterfully employed by its architects and engineers. This Adams Street landmark was shamefully pulled down in 1911; as a landmark of this magnitude it existed for too short of time.

The Tacoma was the first structure ever built in which any outer wall carried no burden and served no purpose other than ornamentation and the keeping out of wind and weather, which became one of the fundamentals of skyscraper design.⁷⁶

From the twelfth story we are able to obtain a splendid bird's-eye view of the city, and we can see far out on Lake Michigan, if the smoke isn't too dense.⁷⁷

Tacoma Building

Chicago

Holabird & Roche, Chicago

1889



(73) The Tacoma Building in Chicago was one of the most sophisticated skyscrapers of the age.

Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox, and Tilden Foundations. Photographer: Chicago Architectural Photographic Co.

The Tacoma was a skyscraper that was humble in size, yet giant in importance. Here stood, a skyscraper that, depending on who you reference, stood by means of either a complete metal skeleton throughout, or, one which stood by means of a *partial* metal skeleton *with the help of some bearing walls*. This point has been argued for years – its importance, some feel, is paramount to the *understanding* of the skyscraper. Essentially, the two street fronts of this skyscraper were indeed completely supported by metal – thus being wholly curtain walls from top to bottom. It was shown here – *first* – that the dictates of gravity could be mastered without massive load-bearing exterior walls. The structural matrix of the Tacoma included wrought iron columns, braces, spandrel beams, and floor girders; cast iron was employed for lintels and mullions, and Bessemer steel for floor beams. The Tacoma's remaining walls – three-feet-thick at their base - were indeed *load bearing*, including two interior, transverse, brick walls that rose as giant stabilizers from foundation to building top. At best, the Tacoma Building was a structural hybrid, but an important hybrid.

All the various metal parts and pieces of the Tacoma Building were held together by rivets, an important *first* in skyscraper construction. High strength nuts and bolts were eschewed for the "speedier application" of red-hot rivets; this decision would be reversed some seventy years later.

One more contribution merits mentioning, shelf angles. These "long metal trays" were riveted to the periphery of the building's frame to support the brick, stone, and glass that wrapped the building. These were included at each floor level in order to support no more than that floor's weight; material and wind loads were transferred to columns which eventually carried those forces to its mat foundation for dissipation.⁷⁸

To the man in the street, the woman shopper, the newspaper boy, and the stock broker, all of this was invisible. What these folks did know and understand was that the Tacoma Building was a handsome and altogether safe building to inhabit. It cost its owners \$500,000 to construct, had four retail establishments on its first floor, and 156 offices on floors two through thirteen. Its five passenger elevators reportedly carried 8,000 passengers each business day.

In plan the Tacoma was L shaped, eighty feet fronting on LaSalle and 101 feet along Madison Street. It was easily identifiable by most Chicagoans due to its undulating walls – projecting three-sided bays stacked up to the cornice line. These glazed bays allowed a greater amount of sunlight to penetrate into the office areas. What was considered customary then is mercifully no longer tolerated: *the men's room was on the twelfth floor, the women's on the eleventh.* For this, and other amenities the tenants were "...all compelled to pay high rentals it is presumed that they are doing something to coax the almighty dollar in their direction."

The Tacoma Building was never the tallest building, it stood only 165 feet tall, but it did make an impression nationwide due to its "great step in architectural engineering." The decision to demolish the "old" Tacoma was announced April 22nd, 1929:

The world's first steelframe [sic] skyscraper stands ready for the wrecker's sledge and torch, having lived out its usefulness in forty-two years. Dwarfed by modern structures that lift their towers thirty and forty stories above the downtown Loop street, the old Tacoma Building has been condemned to yield its place to a new building...It was a show place when the world came to Chicago for the Columbian Exposition in 1893.⁷⁹

The 1893 Exposition lay in the distant past, and historic preservationists would reside in the distant future. In either case, the Tacoma was wrecked. Within two years the forty-nine-story One North LaSalle would stand in its place.

Among the many magnificent structures of Chicago, the Auditorium is the greatest. It is the most famous building on the American continent. At once a grand opera house, a superb hotel and a mammoth office building, there is not to be found on the face of the earth a pile that will compare with it.⁸⁰

[the Auditorium Building]...not only inflated the pride of the citizenry well nigh to the bursting point, but its importance and fame soon jumped over local limitations, and the great building became first of national and then of international significance.⁸¹

Auditorium Building

Chicago

Adler and Sullivan, Chicago

1889

The Auditorium Building was America's ultimate multi-use building of the nineteenth-century. This giant skyscraper, for a short time the nation's second tallest (the 1885 Chicago Board of Trade at nine floors, 322 feet was taller), offered businesses, cultural institutions, politicians, and the public, the following – *all under one roof*:

- the Auditorium Hotel which offered 400 luxurious guest rooms (275 faced the street, ninety had private bathrooms)
- the Auditorium Theater which boasted seating for 4,237 (more seats than any other opera house in the world, second in size to Milan's La Scala)
- a recital hall which sat 500
- a "speculative office building" that featured 136 finely-appointed offices
- a banquet room / convention hall with a 1,000-guest catering capacity
- four retail stores
- the Observatory Tower, public viewing eighteen-stories up

This skyscraper became a multi-use building out of need, economic need:

The Auditorium building of Chicago is a notable instance. This consists of an opera-house and a hotel and office building. In foreign lands, where the opera receives a government subsidy, the first of these would be quite distinct from the other two, and would be given a monumental form, as has been done in Paris, Vienna, Dresden, and many other European capitals, and which is entirely in keeping with the ornamental and festal nature of the building. In America the opera, as all other public amusements, must depend on private support, and the opera-houses must be erected by private capital. It was to make up the deficit from operatic performances on a large scale, apparently unavoidable in this country, that the Chicago Auditorium was built to include the hotel and office building from which a regular income might be obtained. It was, therefore, absolutely necessary to place the opera-house in the centre of the block, and indicate its presence by some external feature, which, in this case, is a massive tower,

that commercial necessities have pressed into service for offices. The solid mass of the Auditorium does not come from the taste of the architect, nor is the hiding of the opera-house a system of planning chosen because of some imagined architectural advantage. The conditions under which the building was erected were such that no other plan could have been followed.⁸²

No matter which plan was followed, the Auditorium Building had something for everyone. Live theater and grand opera were presented, and even a national political convention was convened there.⁸³ Chicagoans and visitors alike partook of its celebrated restaurants and bars, magnificent lobbies and reception areas, parlors, and the ubiquitous barbershop. Many simply scaled its tower for eye-popping vistas of the great inland city and its great inland "sea." To some the Auditorium Building was part amusement and part business, but to others its significance rested with its masterful architectural design.



(74) The stone colonnade of the Auditorium Building marks the location of the onetime offices of Adler & Sullivan. This was the eerie of ideas, the place from where so much inspiration poured forth, the now hallowed ground of early skyscraper development in Chicago. Photo by author.

The father of the Auditorium Building was Ferdinand Wythe Peck (1848-1924), a native Chicagoan, lawyer, real estate broker and developer. He was described as a "cultured man-decisive, pragmatic, visionary-whose fondest dream was to bring grand opera to Chicago." He was a civic leader extraordinaire and quickly proceeded to assemble successful businessmen into a mighty force, an ad hoc group dedicated to raising the required capital necessary to bring the colossal and heretofore unheard of project, to fruition. Peck's announcement on May 29th, 1886 of the project surprised, and elated many. Time was of the essence.

The "engine" moved swiftly with those of persuasion and privilege giving heartily to the cause. By the autumn of 1886 it was announced that "over 150 of the richest and best of our citizens" managed to raise \$2 million for the Auditorium's construction; it was now time to garner contractors and sign contracts. Revisions and refinements of the design were many. Architectural drawings were not finalized until April 1887, some issues remaining unresolved during site acquisition: the required demolition of any existing structures, final details regarding the type of roof, and the exact appearance of the "office building" component.

On January 20th, 1887, the contract for excavation was let with demolition commencing on the 28th. In the midst of a Chicago winter, the city's opera lovers witnessed the start of a small miracle, the removal of earth and debris from a forlorn and frozen site, a site destined to become the home to divas and dandies. The project's investors "saw 200 men and thirty teams breaking ground."⁸⁴ The month of September, 1887, marked the laying of the skyscraper's cornerstone, and by March, 1888, the building was fully roofed - all 62,000 square feet of it! It was further reported that the cope stone on top of the tower "was laid with impressive Masonic ceremonies on October 2, 1889." On December 9th, 1889 the Auditorium was officially opened with President Benjamin Harrison and Vice President Levi Morton in attendance. A host of other public figures and society's elite contributed to the gala. Louis Sullivan, Dankmar Adler, and Ferdinand W. Peck were there too, and graciously recognized for their heroic contributions to the project.

The Auditorium Building's size and complexity mystified most Chicago observers; few had ever seen anything larger – on land or sea. The Auditorium's grand lobby was of particular delight:

The first adequate idea of the grandeur of the Auditorium and the general style of its decorations is obtained on entering the lobby. Here is in itself a vast hall, with a score of polished marble columns supporting arches, which form a fine perspective. The floor is marble mosaic worked into complicated designs. An examination of this floor and a knowledge of the seemingly endless labor required to lay it is instructive as showing the magnitude of the work. For the first time in the United States the mosaic has been introduced on a large scale. Those who have admired the results attained in the Rookery building will know what to expect from the Auditorium. No more daring thing was ever attempted in decorations. There was but one precedent. The lobby shows it to advantage, although the effect is modified by the more brilliant colors of the marbles. Some of the finest marble ever brought to the United States is utilized in the construction of the grand staircases which open from the right side of the lobby. The most exacting care was taken in the selection of this marble. Every slab is a painting in itself. The grand staircase is marble, mahogany, bronze and gold. It is one of the finest examples of skill in the United States. The lobby is plain but none the less beauti-

ful. The solid ivory color of the walls is kept from becoming monotonous by the use of a limited amount of gold leaf. The general impression is one of vastness and anticipation. Five entrances lead from the lobby to the parquet. The grand staircase leads to the foyer, from which point probably the best general view of the hall can be had.⁸⁵

Some considered its beauty to be unsurpassed, inside and out. Others formed a more utilitarian opinion judging the building's *location* foremost when deciding upon a business headquarters. Here too, the Auditorium excelled. Public and private transportation was located at the foot of the Auditorium Building in the form of street cars, horse-drawn carriages, and only later by the automobile and the electrified train – Chicago's famous "el." Additionally, four inter-city rail stations were within a fifteen minute walk, so too were major banks, abundant retailing, corporate headquarters, hotels, theaters, and the offices of all four levels of government (city, county, state, and federal). Grant Park, the green carpet on the edge of Lake Michigan, was the Auditorium Building's "front yard," a breath of fresh air taken-in with the opening of any window. In short, this skyscraper's location was superb, a guarantee of commercial success.

From bottom to top, Chicago's newest skyscraper, a building of cage construction, awed the architectural community as well as the casual observer. The Auditorium Building's foundation was best described as a series of large mats, laid one upon the other. Two layers of one-foot by one-foot thick pine beams were closely laid and anchored in place by a thick layer of concrete. On top were placed layers of iron beams and rails, these too secured by concrete. Placed directly over these mats were "heavy alternate courses of dimensioned and rubble stone, with a cap stone carrying the cast-iron bases of the cast-iron columns."

Respected architectural historian, Carl W. Condit, stated "The Auditorium is the triumph in the traditional materials of masonry and iron and the structural forms appropriate to them." Despite the existence of load bearing walls within the building's envelope, the building exhibited an amazing grace while employing the necessary gymnastics required to span the vast auditorium, the backstage space, multiple lobbies, and other public areas. Much of the building was, in fact, composed of huge volumes of open space. Giant trusses, iron columns, girders, and beams allowed the building "to live," to be what it wanted to be, to celebrate its very vastness with grace and a certain humility. Adler and Sullivan planned it that way.

The Auditorium Theater was superb. No opera or theater venue in the country rivaled it. The room measured 118 by 246 feet, so large that the Home Insurance Building could be laid down inside it with room to spare. Its walls and ceiling were profusely decorated with brightly-colored stenciling, and when its 5,000 electric houselights were on, the entire room glowed. This space truly was a showstopper:

The Auditorium Building was designed to evoke deep emotional responses from all who experienced it, and was quickly assimilated into the hearts of Chicagoans although they did not always know why. From the outset the Auditorium Building was embraced by the public and became a part of the popular culture of Chicago. The building was portrayed in every imaginable medium. It was described in detail in prose and poetry, and its image was reproduced on picture postcards, souvenir teapots, and various other commercial gewgaws.⁸⁶

Chicago's Auditorium Building, detractors could argue, was the P.T. Barnum of contemporary skyscrapers, the one with height *and chutzpah*. Criticisms notwithstanding, the Auditorium Building was a serious piece of work, a building with unrivaled artistry, the largest jewel in Chicago's crown.

Located up top was the "viewing platform." One of the most popular tourist destinations during Chicago's World's Columbian Exposition of 1893 (the world's fair) was the observatory atop the Auditorium Building. Pushing through the roof of the office tower was a stone and steel projection, a "little building" of thirty feet in height. Here, one steel-framed platform with a wood plank floor allowed guests to leisurely stroll about while taking in the scenery. A cat walk, lifting higher yet, laid claim to "the highest public viewing point in all Chicago." The cost was 25-cents for adults, 15-cents for children. Adventure-some writer, John Flinn, recorded the following in 1892:

Two thousand square miles of water are spread out before the vision of him who climbs to the top of the signal service observatory. Michigan City, half hid by the sand hills, which line the eastern coast, is plainly revealed on a clear day. South Chicago lays almost at your feet. Evanston is in view, and its University buildings can be picked out by those familiar with the place. Below you is the city, a seething ocean of smoke, with half obscured buildings, shoving their domes and battlements out of the clouds, as if vainly striving for one breath of fresh air.⁸⁷

Another writer penned the following upon his visit in 1909:

At the left of the theater entrances on Congress St. is an elevator which takes visitors to the top of the tower, 285 [sic] feet above the street, and one of the three highest points attainable in Chicago. As the tower directly faces Lake Michigan there is always a splendid view in that direction, and in general over the city, especially in the Loop District.⁸⁸

The office tower was indeed a valued location for the conducting of business. Immediately after its completion, the office of "Adler & Sullivan Architects" came to occupy Suite 1600. This was a two-floor aerie served by two elevators that featured drawing, consultation, contractors, printers, storage, and general office rooms. Private offices were reserved for structural engineer Mr. Mueller, and architects Mr. Adler, Mr. Sullivan, and a young Mr. Frank Lloyd Wright.

A closer view of the colossal Auditorium Building reveals:

- building stood twenty floors, 270 feet tall (now eighteen)
main block stands ten floors, 145 feet tall office tower rises
another eight floors, ninety-five feet more two-story observation
tower rose another thirty feet above the roof (demolished)
- weight of building (dead load): 110,000 tons
(Sears Tower, nine blocks west, weighs 222,500 tons - dead load)
- weight of office tower – alone: 15,000 tons,
- the office tower's dimensions are 41 feet north-to-south, and 70 feet east-to-west
- building's footprint 1 ½ acres
- building measures a whopping 362 feet along Congress Parkway,
187 feet on Michigan Avenue, and 161 feet on Wabash Street
- seventeen million bricks throughout

- first two floors faced with Minnesota granite, upper floors faced with Indiana limestone
- its seventh floor is marked by 38 compound stone arches (east, west, and south sides)
- 50,000 square feet of Italian marble mosaic flooring (50 million *hand-placed* pieces!)
- 800,000 square feet of terra-cotta as fireproofing
- 175,000 square feet of wire lath
- 60,000 square feet of plate glass
- twenty-five miles of gas and water pipes
- 230 miles of electric wire and cable
- 10,000 *electric* lights throughout
(one of the first buildings anywhere wired for electricity at construction)
- eleven dynamos
- thirteen electric motors for driving ventilating apparatus and other machinery
- four electric motors for driving machinery
- eleven boilers
- twenty-one pumping engines
- thirteen passenger elevators
- twenty-six hydraulic lifts for moving stage platforms in the auditorium
- value of the site at time of construction: \$1.5 million
- cost of building: \$3.5 million
- U.S. Signal Service (United States Weather Bureau) originally occupied portions of 17th and 18th floors; this station occupied "the highest artificial altitude of any in the country."

The Auditorium Building still stands; currently it is the home to a university, its hotel rooms and office suites long gone. The Auditorium Theater was recently restored to its original grandeur and continues to host concerts and live theater. Some exterior changes have taken place throughout the years too, but one of these was inexcusable – the gutting of the south side's first floor and its subsequent "rebirth" as a city sidewalk (the widening of Congress Parkway erased the existing sidewalk!). Despite that, the Auditorium Building's overall impression is that of reigning monarch, the queen of a bygone age, the toast of Chicago.



(75) Massive blocks of Minnesota gray-speckled granite, two-billion year old products of volcanic activity, form the base of the Auditorium Building. Photo by author.

Chapter Three

The Gilded Age and the New Aristocrats

1890-1899

Skyline: Symbol of Wealth, Romance of Height



(76) These new aristocrats, like famous people posing for their portraits, cluster on New York's Park Row. The World, Tribune, Times, American Tract (with mansard roof behind the Times) and the Potter ruled the sky like no buildings before. Their prominent height, proximity, and collective visual strength were novel.

The 1890's witnessed artist Charles Dana Gibson create the *Gibson Girl* image. This beautiful and stylish young woman was the epitome of femininity, at least in graphite. The *Gibson Girl* was an ideal woman who appeared weekly in *Life* and other magazines of the day displaying the latest in hair and clothing styles. Her images were ubiquitous and instantly recognizable. Dime novels were popular in the 1890's and

so was a wiggly dessert invented in 1897, Jell-O. Bicycles were the rage, and only by the end of the decade could one expect to see automobiles. The damage wrought by the depression of 1893 would soon pass; new subways, new bridges, and the music of Scott Joplin would move the country. During the Gilded Age, the "world's tallest building" title would change hands three times.



(77) Bankers, real estate speculators, brokers, industry giants and others of means occupied offices in the top floors of the great skyscrapers of turn-of-the-century America. They were proud, moneyed people who were, for instance, the most likely to drive their own 1899 Winton automobile to the newly-opened Park Row Building.

(78) Sometimes the "privileged" lived in stone-faced houses.

These energetic times put into the sky buildings the likes of which few could have imagined only twenty years earlier. In rapid bursts of creativity cities reared up to proclaim their places in the sun – literally. Lower Manhattan was without question the east coast's epicenter of skyscraper development. Some two dozen blocks in old New Amsterdam, with its narrow Medieval-like streets, were the home to the tall experiments of architects, engineers, and builders. Here was the fertile soil from which sprang the tenacious towers and slabs, the corporate castles of New York. This was the laboratory that produced architecture of a high order, the kind of American architecture that unabashedly proclaimed to the world, "We are here! We have arrived!" Portions of the Battery, and indeed some nearby streets were less than ten feet above sea level. From ocean-going vessels and the distant Jersey shore views of lower Manhattan rendered its terra firma a thin gray line. Buildings rose as spikes driven from underneath, the tallest ones in the center. Like some stalactite ballet, shorter buildings danced and clustered around their taller counterparts. They existed in concert, as a unit, a well choreographed machine of wealth.

In Chicago, a pancake city of railroad tracks, factories, and livestock, great experiments were under way. Tall steely-ribbed buildings were lifted above the swampy ground of

Chicago to the amazement of its populace and the eastern press. Manhattan's towers were stodgy, slathered with foolish details and offered only small windows. Chicago, the city of powerful merchants and ward bosses, would witness bold structures dreamt of by adherents to something called the "Chicago School." With a fresh outlook Chicago's designers would set the standards for a new type of skyscraper design.



(79) Piles of coal, hissing boilers, and long hours were the realm of the "furnace man" who was found in the hot basement of every skyscraper. This 1909 view is a tribute to the unsung heroes who toiled "down there."

(80) Most of the time, the "not-so-privileged" lived in wood houses. This house was most likely the type the furnace man and his family resided in. His modest two-story frame dwelling contrasted sharply with that of the much wealthier business owner's three-story stone and slate mansion. One man dictated letters in the penthouse while the other shoveled coal far beneath the lobby. Each was responsible for the hundreds of people in between.

The 1890's provided opportunities to investors and entrepreneurs alike and included such luminaries as Rockefeller, Morgan, Pulitzer, Pabst, Pullman, Potter, Hammond, Heisen, Betz, Wainwright, Brooks, Astor, Bartlett, Van Ginkle, Taylor, Spreckles, Brumder, Park, Gillender, and one-hundred more. Despite their various occupations they were all *builders*, each in various ways was responsible for having a skyscraper erected during that golden age of unbridled free enterprise. Fraternal organizations, retail concerns, newspapers, the hotel industry, banks, insurance companies, and businesses of all types constructed skyscrapers as their own headquarters and as investment vehicles. These were magnificent achievements at a time before motorized flight and when the exact locations of the north and south poles were still unknown.

With so much building going on and so much money to be made rivalries ensued. Architectural firms competed for the lucrative commissions provided by each skyscraper project. Construction companies, engineers, and thousands of suppliers were eager to participate. Cities competed for the "tallest building" record in their state, county, and region. "The Tallest Building in the South" or the boast "The Tallest Building West of the Mississippi" had marketing value and bestowed prestige on the home town.

The Gilded-Age concluded with certain architectural firms and individuals in very enviable positions. Professional status depended wholly on commissions, with special em-

phasis upon "prestigious" clients. In the minds of design firm hot-shots industrialists, venture capitalists, and government sponsors coalesced into "stables" or "client families." These were pursued, and indeed sometimes hounded into bringing their business to "the firm." These select clients were jealously guarded commodities, they were repeat clients with deep pockets and were pampered with the expectation of continued business and continued networking opportunities. The Burnham firm, in all of its incarnations, was champ with no less than thirty-four skyscrapers to its credit – just during the nineteenth century. Other Chicago firms weighed-in too: Holabird and Roche claimed fourteen, Jenney & Mundie chalked up fifteen, and Adler & Sullivan counted ten. Large New York firms also participated in the scramble with George B. Post leading the pack with nineteen, Clinton & Russell scored fourteen, and McKim, Mead, & White claimed ten skyscrapers completed before the year 1900.



(81) Grand Central Station, one of the first skyscraper conversions.

Even train stations were not immune from the modernity and prestige the "skyscraper" afforded. New York's ostentatious Grand Central Depot, whose cornerstone was laid September 1, 1869, was formally opened to the public on October 9, 1871. It had a front (on 42nd Street) that measured 240 feet long with twenty-one acres of structure behind it. The giant building was designed by John B. Snook and was sponsored by the Commodore Cornelius Vanderbilt and his considerable fortune as a new nexus for the city. It was to be the home to the New York and Harlem, New York and New Haven, and New York Central railroads and indeed it became just that and more. The "head house" was sub-

stantially remodeled in 1899 to reflect a more "contemporary" appearance. As a result, Grand Central's "palace" stood six stories tall and was flanked by set-back towers complete with domes and clocks. Architect C.P.R. Gilbert recreated the train terminal in the manner of a skyscraper and employed the imagery of the "skyscraper".

Developers vied for the most prestigious of clients, those with the largest staffs and those with the largest vaults. Banks, law firms, insurance and advertising companies were eagerly sought. Skyscrapers were erected with the latest amenities: abundant and high-speed elevators, electric lighting, access to telephones and telegraphs, and larger floor plates to accommodate growing office staffs.

In 1890 newspaper publisher Joseph Pulitzer, with architect George B. Post, erected the World Building. Its twenty-three floors and 309 feet ranked it the tallest, anywhere. This skyscraper housed the headquarters and business offices of the *New York World* newspaper. And from here was also published the *World Almanac*, a yearly compendium of facts and statistics that also included, since 1895, a list entitled "Height of Prominent Buildings." This list of Manhattan's tallest included the World (Pulitzer) Building but no other *newspaper* building was listed, no matter its height or prominence. Corporate rivalry was the suspected culprit (as four other newspaper-headquartered-skyscrapers should have been included, but were not).⁸⁹ This policy changed after the turn of the century. One-upmanship was rife, especially in New York, and location meant everything. A busy intersection promised a successful project. A skyscraper's first floor retail shops, if heavily visited guaranteed continued rents to the building owner. Cafes, restaurants, or bars with easy access off the lobby were convenient for tenants. A high visibility entrance near a subway station or trolley stop was an added benefit.

The skyscraper was a symbol of wealth, the worthiness of the corporations that built or inhabited it. This would never change. During the 1890's many skyscraper tops met the sky with giant domes, colonnades, imitations of Greek temples or steeples. Each wished to differentiate itself from the others and by and large were successful. From various distances throughout Boston, Buffalo, Milwaukee, Detroit, and Pittsburgh each building was distinguishable; the bank had a dome, the insurance company had a flat top, the building where uncle works has a copper spire – lighted at night. A company's letterhead can say much but its architecture says everything.

London-born John Ruskin (1819-1900), full-time art and architecture critic and part-time curmudgeon, was critical of the superficiality and facadism perpetrated by the "form givers" who preferred the styles of antiquity:

These pediments and stylobates, and architraves never excited a single pleasurable feeling in you – never will, to the end of time. They are evermore dead, lifeless, and useless, in art as in poetry, and though you built as many of them as there are slates on your house-roofs, you will never care for them. They will only remain to later ages as monuments of the patience and pliability with which the people of the 19th century sacrificed their feelings to fashions, and their intellects to forms.

In your public capacities, as bank directors, and charity overseers, and administrators of this and that other undertaking or institution, you cannot express your feelings at all. You form committees to decide upon the style of the new building, and as you have never been in the habit of trusting to your own taste in such

matters, you inquire who is the most celebrated, that is to say, the most employed architect of the day. And you send for the great Mr. Blank, and the Great Blank sends you a plan of a great long marble box with half-a-dozen pillars at one end of it, and the same at the other; and you look at the Great Blank's great plan in a grave manner, and you daresay it will be very handsome; and you ask the Great Blank what sort of blank cheque must be filled up before the great plan can be realized; and you subscribe in a generous 'burst of confidence' whatever is wanted; and when it is all done, and the great white marble box is set up in your streets, you contemplate it, not knowing what to make of it exactly, but hoping it is all right; and then there is a dinner given to the Great Blank, and the morning Papers [sic] say the new and handsome building, erected by the great Mr. Blank, is one of Mr. Blank's happiest efforts, and reflects the greatest credit upon the intelligent inhabitants of the city of so and so; and the building keeps the rain out as well as another, and you remain in a placid state of impoverished satisfaction therewith; but as for having any real pleasure out of it, you never hoped for such a thing. If you really make up a party of pleasure, and get rid of the forms and fashion of public propriety for an hour or two, where do you go for it? Where do you go to eat strawberries and cream?⁹⁰

Strawberries and cream, indeed. During the Gilded Age there were many "Mr. Blanks" and there existed an American culture immersed in the visual delights of the classical world. Few listened to Ruskin. Perpetrators of classical architecture, Ruskin asserted, were the slaves of fashion, nothing more; Caesar was dead!

How the Skyscraper Worked

The skyscrapers of the 1890's were seen as new inventions. They were, as now, containers, vessels for people and their various tasks. Inside were hundreds of spaces, some large and some not so large. Daily, myriad functions occurred throughout these towers and were performed by building staffs and tenants. The skyscraper, even then, was a microcosm of the city.

In the life of a skyscraper five dates figured prominently. There was the day of the groundbreaking, the cornerstone laying date, the topping-out date, opening date (tenants could take occupancy), and the ceremonious dedication date (a formal public opening). After tenants and contents were settled it was discovered that for the first time unrelated men and women worked side by side. Agriculture and factory work did not allow for the sexes to "operate" in such close quarters for such extended periods of time. Desks and drawers were dangerously close to one another some claimed.

Travel to the great buildings in America's cities involved quite an excursion, more often than not, by public transportation. An omnibus, electric trolley, elevated train, or subway delivered the office workers - maybe including a short walk - to their workplaces. Horse draw buggies, and only later automobiles, drew up to the main entrance where the building's uniformed doorman would assist in the rider's dismount. Walking into the building, tenants and visitors whisked by a newsstand, a shoeshine "parlor" and a cigar store. A barber shop, bank, and restaurant (some even served strawberries and cream) were also common features. An apothecary shop carried racks of penny postcards, modes of communication when few had telephones and postal delivery was three times per day. An elaborate brass mail box was nearby with a glass chute rising upward only to disap-

pear into the ceiling above; letters and cards trickled down, inside it, from the faceless hundreds above.⁹¹

The larger, more pretentious "public" lobby gave way to an adjacent elevator lobby, more intimate and more hectic. Here uniformed elevator captains manned the cars, delivering thousands to locations up high. On staff were a plumber, a carpenter, an "electrical engineer," locksmith, furnace and boiler man, and a fireplace sweep. A garbage and trash crew stood by too. The top floor of some early skyscrapers included a public restaurant or rooftop promenade, where, on hot summer evenings the view and a small orchestra were popular amusements. It was felt that musicians brought civility to the skyscraper.

The office floors contained anywhere from fifteen to thirty private office suites each. The periphery, or outer ring, boasted the larger offices, the inner – separated by a corridor – tended to be for service functions, waiting rooms, secretarial pools, and clerks. Located near the elevator lobby on each floor could have been found a drinking fountain with filtered running ice water and a mail chute. Also nearby, on each floor, were the "gentlemen's lavatories." The women's lavatories were customarily located on one or two floors of the skyscraper but they included a "comfortable retiring room." Each office had a washstand with running water and a hat and coat rack. The budget for one 1890's skyscraper included a cost of \$666.30 for hat and coat racks, and the sizable entry of \$3,010.45 for cuspidores.



(82) Probably for the first time unrelated men and women worked side-by-side for eight or more hours in the same one or two rooms. Office skyscrapers, probably from their very inception, were places where "advantages were acted upon" or there were rumors of such behavior. This comical image dates from 1905. Spouses were suspicious and sassy images did nothing to quell anxieties. This view depicts office-work-hanky-panky with characteristic Victorian charm – and perhaps a modicum of truth. Skyscrapers were filled with men and women, where vast rooms acted as the tension-filled playgrounds of the courageous and the foolish. A suggestive "Do it now" appears on a wall tablet.

Inside each office were wooden desks, filing cabinets, book shelves, meeting tables, and all types of chairs and benches. Ceilings were high, perhaps twelve feet or more. Walls were sometimes wainscoted and wallpapered. If painted they were trimmed with stencils. Floors were of hardwood, usually oak or maple. Window dressings were usually heavy

and layered with dark colors prevailing. Still, many had simple white shades. Large pots with even larger leafy plants were common. Some suites, especially on the higher floors, featured wood burning fireplaces. Corner offices were favored and were also rented at a premium. Anyone close to a window jealously guarded their turf. Views were prized and could be taken away at the boss' whim.

More modern office buildings included *electric* lights, both sconces and ceiling-suspended fixtures. Electricity was delivered by copper wire, wrapped with cotton thread, and snaked inside the walls emerging to serve each tenant. Electric powered machines flooded the typical American office. The telephone and telegraph were there and so was the Anders Magneto Printing Telegraph Instrument. The speaking tube connected offices by carrying voices through tin pipe that snaked through the building. The Lamson pneumatic tube delivered, by enormous air pressure, a "tube cartridge" with a written message inside to a central dispatch. From there it was routed to the proper office. In 1897 the General Telephone Company patented the intercom. There were also the Lenox Intercommunicating Telephone and the General Telephone Company's intercom of 1897. Telephones, printing telegraphs, keyboard transmitters, and dozens of like machines appeared for the office market, but only an invention called the typewriter was king. Despite all the modernity, the fountain pen and ink well would remain for decades more.

Offices, by this time, were heated by radiators positioned close to the windows of the outside wall. Hot steam was produced by coal-fired boilers in the basement and directed through a complicated piping system that ran throughout the building. Coal was delivered by horse-drawn wagons bearing mounds of the black stuff. Arriving in the alley they queued up for their turn to unload. At the bulkhead doors with metal ramps the wagons were tipped resulting in a deafening clamor as the load tumbled toward the giant coal bins in the basement of the great building. Tons of coal per day arrived like this. Some skyscrapers were fitted with subterranean chambers which were reached by the opening of large metal doors in the public sidewalk, openings which lead to the coal ramps, bins, and furnaces beyond.



(83) The Anders' Magneto Printing Telegraph Instrument dates from 1876 and could be found in office buildings, short or tall, throughout the country. It appeared part piano, part sewing machine, but all business - an indispensable tool of the *New Aristocrats*. Ingram, J.S., The Centennial Exposition, Described and Illustrated. Hubbard Bros., Philadelphia, 1876.

Skyscraper developers knew, even during the 1890's, that a building "designed with a special view to the convenience, comfort, and business needs of the tenants" would make the building a financial success. Part of that success was the building's cleanliness. Depending on the skyscraper's size, dozens of cleaning people moved up through the tower from lobby to penthouse. Water pails, brooms, mops and detergents were hauled out — *after the business day*. Polishers with rags eagerly sought out the moldings, handrails, and door trim. Floor scrubbers, waste collectors, and window cleaners were part of an efficient army of mostly immigrant workers. Hungarian, Bohemian, and Italian women with broken English and broken backs made the floors sparkle. During stolen minutes they ate hard bread, peppers, and spicy sausage. Oblivious to the night crew were the tower's daytime occupants — articulate people who were then at home enjoying their dinners served on linen tablecloths.

THE HOME OFFICE of —

The Prudential

Largest Office Building in the State of New Jersey



From this building The Prudential makes payment every working day of about 150 claims, aggregating \$4,000, or between \$4,000,000 and \$5,000,000 per annum.

The Prudential has paid to date, over \$23,000,000, distributed to about 350,000 families, and thereby benefiting more than 1,350,000 people.

The Prudential offers, through Assets of over \$100,000,000, Premiums of \$3,300,000, and Annual Income of \$12,000,000, ample security for fulfillment of contracts, good from start to finish.

Life Insurance for Children, Women and Men, Ages, 1 to 70. Amounts, \$25 to \$50,000.

\$300,000,000 of Life Insurance



The Prudential Insurance Co. of America — JOHN F. DRYDEN, Pres.
Home Office: Newark, N.J.
22

(84) This advertisement appeared in the widely-read Harper's Magazine shortly after the completion of Newark's Prudential Building in 1892. Two potent corporate images, the company's skyscraper headquarters and The Rock of Gibraltar figure prominently. The 150-foot tall building was demolished in 1957; the 1,396-foot Rock still stands.

Prudential Building

Newark

George B. Post, New York City
1892

The Prudential Insurance Company was founded in Newark, New Jersey, in 1875 as "The Prudential Friendly Society." The company boasted that "it was the first organization of its kind to practically demonstrate the possibility of extending the benefits of life insurance to the masses." Within a quarter century The Prudential Insurance Company would construct an office complex in downtown Newark consisting of four skyscrapers

and by 1942 a fourteen and a twenty-one story building would have been added.

The first skyscraper, referred to as "The Main Building", was officially opened on December 3, 1892. It was a gigantic, block-long structure and it was billed as "the largest office building in the State of New Jersey." Its design came from the mind of New York architect George B. Post and those of stonemasons of the French Romanesque period. It was a stone castle and it was pure Post, at his usual and at his best. This picturesque pile rose eleven floors, 150 feet, and stood by means of a steel frame hidden beneath tons of gray Indiana limestone. Although a steel-framed structure, the building's brick-backed stone walls measured anywhere between five and fourteen feet thick; strength and stability were Post's watchword.

The Prudential Building was punctuated with hundreds of windows, it featured twin conical caps at its corners, and it housed hundreds of office workers in relative comfort. Clearly within the Romanesque genre, the medieval feel was reinforced by huge stone blocks and dozens of very large arches. Bartizans topped by finials lent one to believe archers would appear at the windows at any moment. Such was the force of this architectural style. The only item lacking was n operating moat. This was the style chosen, selected by architect Post and approved by the company's president and board of directors. The Romanesque style, as applied here, did not speak of strength, solidity, or permanence - it shouted it! This company was here to stay and here is where they are holed up.

Compliments of
THE PRUDENTIAL INSURANCE COMPANY
OF AMERICA



HOME OFFICE ~ NEWARK, N.J.

(85) Proper corporate image dictated a wholesome environment, an image of family and corporate security and continuity. An 1890's trade card depicts such togetherness with the implication that the grandmother will leave more to her granddaughter than just knitting skills.

Before long, the North Building (eleven floors, 268 feet tall), and the Northwest Building (ten floors, 120 feet tall), were added, and in 1901 the West Building (eleven floors, 145 feet tall), was completed forming the original office complex; all were designed by Post. In total some 690,000 square feet of office space was constructed. The complex also boasted fifty-two elevators, 436 telephones, and self-contained steam, water, and electric power plants. The four towers were architecturally similar and were composed of twenty-two-million bricks, 32,000 tons of Indiana limestone, 11,000 tons of marble, and 24,000 tons of iron and steel. The Prudential Insurance Company was housed in a city unto itself, a Camelot of Commerce. In November, 1955, demolition swept away the Main Building, the rest were to follow, and Camelot was no more.

From the top of the Observatory Building...

*[citizens] were viewing [sic] with one another to see who could send up the most rockets, the biggest balloons and the prettiest fire fountains. Beyond a radius of a few blocks from the building all was inky darkness, only a ray of light shooting up between the trees at regular intervals, marking the location of street lamps and the course of the streets, but above all this the heavens were almost continuously illuminated and the display was one that those who witnessed it will not soon forget. It seemed as though the entire space above the clouds of darkness concealing the pretty streets and cosy [sic] homes was filled with giant fire flies, miniature comets, shooting stars, flashes of lightning and screeching fire demons so incessant was the bombardment of the heavens.*⁹²

Observatory Building

Des Moines

Charles Edward Eastman, Des Moines

1896

Dutch-born Garrett Van Ginkle was a wealthy coal operator, a brick manufacturer, and a man who, in 1894, ordered the construction of Iowa's tallest building. Two years later his thirteen-story Observatory Building ranked tallest in the Hawkeye State.

Des Moines' Observatory Building was much more than just another tall building downtown. It was the first in Iowa to be known as a "skyscraper", and its modernity is what caught the public's imagination as never before – in Iowa. The strength of the building's design was due, at least in part, to the absence of historicism – the relying on Greek, Roman, Gothic, French, or any other architectural decorative drapery applied by the architect. Here stood a building of integrity, clean-lined, no-nonsense, a directness borne of the prairie. It was an honest brick box for business.

Architect Charles Edward Eastman (1868-1948) was commissioned by Van Ginkle to design his business block. Eastman was born in Springfield, Illinois, and studied architecture at the University of Illinois from 1885 to 1888. In 1890, he relocated to Ogden, Utah, and became a partner in the firm of Parker, Doxen & Eastman. Within one year he decided to settle in Des Moines and there founded a partnership with John C. McLeland. The firm of McLeland & Eastman practiced from 1891 to 1893. Afterward, Charles Eastman worked under the banner of C. E. Eastman Co.

OBSERVATORY BUILDING, DES MOINES, IA. 547



(86) Observatory Building

In 1895, Van Ginkle assembled a parcel of land measuring eighty-eight by sixty feet upon which to build his skyscraper. After the usual preliminary design changes, and there were many, Van Ginkle's project was fixed: the scheme would consist of a nine-story block with a four-story tower rising above. Upon completion the Observatory Building officially stood thirteen floors, 197 feet tall, and the local press beamed.

The Observatory Block, as Des Moines' pioneer "sky scraper" is named, is proving as popular as it surely deserves, for it affords, beyond any doubt, the most convenient and best office rooms in the city, and is thoroughly modern in every particular. Its owner, Mr. G. Van Ginkle, deserves a hearty good will of every citizen of this city for his public spirit, for he has given, as far as was possible, to the local producer all of the material and labor required for the erection of the building. The building has been examined by experts from all parts of the country, and has been pronounced perfectly safe and an excellent piece of construction. Des Moines is proud of this tallest and finest of her many office buildings.⁹³

At its opening on April 1st, 1896, the Observatory Building was billed as the "Tallest Office Building between Chicago and San Francisco." The four-story tower was christened the "Observatory" and so too the skyscraper. The building was principally of masonry construction – load bearing exterior walls - with the first floor, and the roof, utilizing some steel. Over three million bricks were used throughout and the immense brick walls were laid up in cement; as a result, the building and its 140 office suites were deemed fire-proof.

The first floor lobby boasted a sixteen-foot high ceiling and beautifully tiled floors. There were walls of white Italian marble, a magnificent bronze stairway, and a hall where two hydraulic passenger elevators came to serve the public. Tenant floors had ceilings twelve feet high and each office was wired for electric, and, piped for gas lighting. Fifty-two vaults were anchored in tenant offices for documents and valuables. A contemporary account reported that, "Each floor is provided with a toilet room, in a convenient place, and besides there is a wash room for ladies on the second floor, and one for men on the ninth, which for modern appointments are not surpassed in the United States."

Located in the basement was the dynamo room, an electric generating "plant" that supplied electricity to the building. The large boilers that furnished heated steam to the radiators, and the giant pumps that supplied water for drinking and sanitary purposes - as well as for the hydraulic elevators – were also located in the bowels of the building.

This skyscraper featured a rooftop garden atop the main office block that was lighted with electric lights and decorated with palms and vines. Also atop the roof was the 600-seat "theatorium" for outdoor concerts, plays, and vaudeville. In the 1890's skyscrapers' roofs often became venues for summer entertainment as reported: "The opening of the Observatory roof garden has furnished a topical subject for discussion the past week. Roof gardening is the most prominent phase of summer theatricals, as its great popularity in the east will attest." Entertainment and a view of Des Moines was had for thirty-five cents, a matinee cost fifteen cents.

Standing tall above the office block was a brick, foursquare tower topped by a public observation balcony. This was the ultimate high in Iowa. Here was a vantage point, almost 200 feet above the street, that with the exception of perhaps a helium balloon ride, the likes of which no one had before experienced. Accessed by elevator for one thin dime, the adventurous could survey the city and its surrounds. Then in August 1896, a powerful electric searchlight was installed atop the Observatory tower's thirteenth floor; its beacon nightly swept over Des Moines.

Architect Eastman did not simply build for Van Ginkle alone, he built for all of Des Moines. He bestowed upon those citizens a gift, a building of beauty – a severe beauty that sponged away unnecessary decoration and at least outwardly looked to the future. As is the fate of many of America's early skyscrapers, the Observatory Building too was demolished. By Halloween, 1937, only a column of perhaps a thousand bricks remained standing - some three million others were already considered "fill". By Thanksgiving the Observatory Building was only a faint memory leaving little to be thankful for.

One is driven back upon Philadelphia when one is in quest of architectural aberrations that are bad enough to be good enough.⁹⁴

Hale Building

Philadelphia

Willis G. Hale, Philadelphia

1890



(87) Hale Building. The Cosmopolitan. Vol.XI, No. 1 May, 1891 – October, 1891, "The New Philadelphia", The Cosmopolitan Publishing Company, New York, p.46.

Perhaps the most bizarre looking skyscraper of the nineteenth century was this, Philadelphia's Hale Building. It was an architectural bouillabaisse, a collection of discordant parts, and it was the brainchild of architect Willis G. Hale (1848-1907). The building was demolished years ago. Was this preposterous design that of a castle or a skyscraper office building?

The *Architectural Record* tried to sort it all out:

Consider the Hale Building, how it grows. The problem was to erect a seven-story office building with a narrow front on the principal street, and with rooms devoted to similar purposes and of similar dimensions throughout. The danger was that this uniformity would produce monotony. There is nothing of which your Philadelphian architect is so much afraid as of monotony. In fact it is the only architectural defect of which he seems to go in fear. Variety he must have at all cost, and by securing variety he makes sure that he has avoided monotony, whereas in truth his heterogeneousness is more tiresome than any repetition could be.

Continuing:

The roof reeks with architecture, and the row of chimneys or ventilators, or whatever they are that are protruded to animate the sky-line, and the design of the dormers; - these things may be left to go without the comment which a humane critic has not the heart to give.

Regarding the tower:

...the tower, as a tower of a commercial building is as inappropriate in itself as it is irrelevant to everything else in the building. As a watch tower it might have its uses, though even a watch tower should not be solid at top. But the notion of building a circular staircase at the corner of an office building and providing balconies at the several stages upon which busy Philadelphians ascending spirally about their occasions can step out and enjoy the view; all this is irrational, incongruous and ridiculous, and it is a comfort that it should be ill-done.

At any rate the tower is a violently incongruous with the building to which it is adjoining as it is with any purpose it may be supposed to answer.

Commenting further:

The worst thing about these dreadful buildings, for there are others nearly or quite as bad as the Hale building, is that so far from being venerated by the community they satirize they are regarded in Philadelphia with a fatuous complacency.⁹⁵

World Building

New York City

George B. Post, New York City

1890

One of the nineteenth century's most celebrated and compelling skyscrapers was this romantic record holder, the World Building. The World was completed during what some have considered the "Golden Years" of the skyscraper, which paralleled America's Gilded Age of the 1890's. With its great height and gilded dome, this skyscraper took hold of, and controlled the sky as perhaps no other of its kind had ever done; it possessed "altitude", it "inhabited the stratosphere", and it electrified the space around its top. Here was indeed something new, something special.



(88) The erection of the World Building represented the culmination of publisher Joseph Pulitzer's career. History-Image, New York City.

(89) George B. Post (1837-1913) This New York architect was *the* master of classical revival design and spoke that language fluently. Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 877.

Manhattan's World Building was constructed as the headquarters of the *New York World*, then the most popular daily newspaper in the country. Both the newspaper and the building owe their existence to just one man, Joseph Pulitzer. Born in Hungary in 1847, Pulitzer would eventually become one of the greatest American newspaper publishers in history. He immigrated to America, worked for a series of big-city newspapers, and would come to purchase the *New York World* in 1883. When acquired, the *World* had an uncertain future and a daily circulation of just over 33,000. But soon Pulitzer's newspaper claimed the largest daily circulation in the nation, 250,000 by 1887 and a whopping 320,000 by 1890.

By 1888, Joseph Pulitzer wished to house his burgeoning business in larger quarters and inside a building that would be instantly recognizable on *both* sides of the Atlantic. The forty-one-year-old entrepreneur acquired a parcel at Thirty-two Park Row, in the heart of Manhattan's "Newspaper Row", for the princely sum of \$630,000. Pulitzer chose

the celebrated George B. Post to serve as architect for the *World's* new home, a decision Pulitzer would never regret.

From the outset it was determined that the *World Building*, occasionally referred to as the *Pulitzer Building*, would be the tallest skyscraper of all. It was rumored that Pulitzer closely collaborated with Post to fashion an outstanding Baroque-inspired tower. Design elements that Pulitzer reportedly insisted upon were a large gold dome at the top and a large arched entrance at the bottom. Those wishes were honored, and after drawings of the building were released to the press some influential architectural critics were genuinely cool to the design of the *World*. Wry questions surfaced regarding the building's neo-Baroque top as contrasted with its Romanesque-like bottom. Still, planning continued, but now with increased difficulty for Joseph Pulitzer; since 1887, Pulitzer was almost entirely blind. From then until his death, he directed the *World* and monitored the construction and daily operation of his skyscraper with the help of a devoted staff.

On October 10th, 1889, the cornerstone of the *World Building* was ceremoniously laid with help from four-year-old Joseph Pulitzer, Jr. The building's footprint measured 115 by 136 feet. A basement and a sub-basement were sunk below the sidewalk. Base walls were more than nine feet thick at certain points. All exterior stone and brick walls were self-supporting and connected to interior steel and iron columns, girders, and beams. The *World Building* was, in the truest sense, a fully developed example of cage construction.

Completion of the *World Building* occurred on November 24th, 1890. Outside walls were wrapped with red sandstone for the first four floors. Above, brownstone, buff-colored brick and terra-cotta were the materials of choice. The skyscraper stood twenty-three floors tall and sported a forty-foot tall flagpole. There were fourteen office floors, three mezzanine floors, and six penthouse floors just beneath the dome. The floors were served by eighteen electric and three hydraulic passenger elevators. One of the elevators, an express, scaled the building from the lobby to the twenty-first floor from where visitors could climb a staircase to the observation platform. The *New York World* occupied space on the first and on one mezzanine floor and floors eleven through sixteen. Joseph Pulitzer's penthouse offices, some of which were grand spaces as high as nineteen feet, could be found on the nineteenth floor. In addition, 149 offices were rented to outside concerns on the remaining floors. Architecturally, the *World Building's* tour de force was its dome. Surmounting a ten-sided drum was a ten-sided, iron-ribbed dome with a metal skin overlaid with gold leaf. The dome measured fifty-two feet in diameter and rested upon the tower's two-foot-wide (at that level), load bearing wall. The French Baroque-inspired dome even featured twenty Lucerne windows. The *World's* dome design was rumored to have been inspired by Paris' outstanding landmark, the Church of Saint Louis des Invalides (J.H. Mansart, 1679-1756). George B. Post's rendition resembled Mansart's in important ways: they were gilded with pronounced ribbing, had grouped columns, a segmented drum, and each sported a stone pediment and a metal-jacketed lantern at top.

A gala opening for the *World Building* took place on December 10th, 1890, with it *World* officially standing at twenty-three floors, 309 feet tall. By only five feet, Joseph Pulitzer's tower outstripped the city's previous record-holder, New York City's Madison Square Garden Tower (Stanford White, 1891), itself opening only six months earlier. At the opening elevator rides to the public observatory were offered free to anyone brave enough to

ascend to the highest peak in Manhattan's range. Here, in the iron-girded and copper-clad lantern, guests could survey the city, the bay, and the Atlantic beyond.

Nightly, the office lights of hundreds of newspaper workers shone brightly from the skyscraper. But high above, large white lights, fixed to the dome's ribs, glowed like gently draped strands of pearls. The World Building's dramatic electrification helped to pioneer the nocturnal ritual of *artistically* lighting skyscrapers.

Joseph Pulitzer, the man who was a recognized philanthropist, whose activities were pivotal in making the Statue of Liberty a reality, who had a landmark skyscraper erected, and who was an unquestioned media mogul, died in 1911. The *New York World* published its last edition on February 27th, 1931, and the one-time "City's Tallest" was demolished in 1955 for want of a new way to merge autos onto the Brooklyn Bridge.

Home Trust Company Building

Pittsburgh

Bickel & Brennan, Pittsburgh

1890



(90) Home Trust Building

Here is yet another example of an early skyscraper executed in a rather robust, Romanesque-inspired design. This office tower stood eight floors, 100 feet tall, and was wrapped with limestone, sandstone, and brick for alley facades.

Architecturally, the Home Trust appeared unusually top-heavy. From its heavily rusticated one-story base rose banded, two-story, columns that pressed upward to meet large stone arches. Two belt courses separated third and fourth floors and sixth and

seventh floors. In all, stone arches framed twenty-two window openings. This skyscraper was demolished in 1963.

Masonic Temple Building

Minneapolis

Long & Kees, Minneapolis

1890

On April 8, 1890 the great Masonic Temple Building was opened in grand style. This was the newest of Minneapolis' skyscrapers and its distinctive profile, due to its onion-shaped corner dome, was visible for miles throughout the streets of the city. Its eight-story mass was truly a major addition to downtown Minneapolis where it still reigns as a landmark of the first class.

The Masonic Temple Building's exterior is of Minnesota sandstone. The design, the craft, and the superb handling of such material here approach some of the finest anywhere; this building's walls offer a premier example of the use of rough-faced stonework as applied to a skyscraper. The first floor's exterior displays the huge piles of stone necessary for these load-bearing walls to do the work necessary in supporting the other seven levels above. Structurally, the Masonic Temple Building is of cage construction; architecturally, it is Richardsonian Romanesque.

Originally the Masonic Temple Building's first floor was devoted to retail concerns. The next six floors housed offices, lodge and committee rooms for eleven Masonic lodges. The eighth floor once housed a banquet/reception hall, parlors and dressing rooms. These spaces hosted many gala balls and ceremonies for over a half-century.

By the 1970's, the Masonic Temple Building was almost vacant and the wrecking ball seemed imminent. But in 1985, the Masonic Temple Building was saved by a coalition of business leaders and concerned citizens. The structure was restored on its exterior, and on the inside, new spaces were carved out of the bulk of the building for a new use, that of a premier venue for the visual and performing arts. Currently, this landmark is known as the Hennepin Center for the Arts.

Northwestern Guaranty Loan Building

Minneapolis

Edward Townsend Mix, Milwaukee

1890

An exquisite, yet rugged, giant stone box metaphorically describes this building. When finished in 1890, this was the tallest and largest skyscraper in Minneapolis. It rose twelve stories and featured a corner bartizan that pushed above the roof some forty feet. It was from this aerie, the highest point in the city, that people came to view the sights for the sum of twenty-five cents.

The Northwestern Guaranty Loan Company erected this structure as its headquarters office building. It contained over 400 offices, a central light court rising the full height of the building, and six open-cage elevators. The light court, measuring fifty by eighty feet, was girded by iron and glass corridors which gave Victorian-era office workers access to light and fresh air, even though they labored in the center of the building.



(91) Northwestern Guaranty Loan Building

Architecturally, the building's style was Richardsonian Romanesque. Its exterior walls were constructed of red Lake Superior sandstone set above a three-story base of green New Hampshire granite. This great masterpiece of stone, known as the Metropolitan Life Building in its final years, was tragically erased from the Minneapolis cityscape in 1962.

New York Life Insurance Building

Minneapolis

Babb, Cook, and Willard, New York City

1890

What a great and prominent building this was! Perhaps the finest neo-Grec skyscraper ever to rise housed the Minneapolis offices of the New York Life Insurance Company. It stood ten stories tall, contained first-floor banking halls, impressive offices, and building amenities such as an 8,000-volume law library for the use of the many lawyers that rented offices within. A light court rose through the building's core.

The New York Life Insurance Building was faced with red pressed brick, sandstone, granite, and terra-cotta. It was topped by a heavy, somewhat overbearing cornice and four two-and-one-half ton Greek ornaments fixed on the corners.

Perhaps the most impressive lobby ever installed into a 19th century skyscraper existed in this building. The Inner Court, as it was called, featured the usual marble-slathered walls, soaring spaces, and glass-and-iron skylight. But what separated it from the others of its ilk were the pair of iron and marble staircases that stretched upward in a double

helix to a second-floor lobby. These sinuous ribbons appeared weightless and delicate; they were masterpieces pure and simple. The criminal demolition of this landmark occurred in 1967, and again, landfills received more of America's artwork.

Penn Mutual Building

Philadelphia

Theophilus Parsons Chandler, Jr., Philadelphia

1891

The Penn Mutual Life Insurance Company erected this structure as its home office. It is a valuable example of the excesses employed by architects and their clients to capture the imagination of the public. The Penn Mutual's parti is quite simple, a block base with an adjoining tower. But the simplicity ends there. What transpired was quite unique in the annals of architecture. The front facade displays Ionic columns, Romanesque arches, a Flemish-inspired top, and a Moorish or Oriental tower. Also included are statuary, carvings, finials, cresting, and every type of architectural doodad then known. The Penn Mutual was a confusing mass of shapes, a veritable stew of solids and voids. The tower, although seemingly an obligatory gesture, no doubt housed a circular staircase which ascended to a tiny open-air observatory.



(92) Penn Mutual Life Insurance Building. *The Cosmopolitan*. Vol.XI, No. 1 May, 1891 – October, 1891, "The New Philadelphia", The Cosmopolitan Publishing Company, New York, p. 45.

Despite its design shortcomings, the *spirit* of reaching upward was indeed present. Here is a building that wanted to be tall but did not quite know how. It was a multistoried, elevator-served office building with an, albeit gangling, eight-sided tower, a tower that in some respects was no different than towers included in similar parts in New York and elsewhere. This tower, sure to be over one-hundred feet tall, was probably visible throughout much of Philadelphia, a landmark of sorts.

The architect of the Penn Mutual Life Insurance Building was the prolific Philadelphian, Theophilus Parsons Chandler (1845-1928). He is credited with designing over 150 structures most of which were private homes and churches. Some office buildings also were included in his repertoire but they were few. Tallest of his secular commissions was indeed the Penn Mutual followed by the six-story Liverpool & London & Globe Insurance Company Building, a flamboyant business block once located on nearby Walnut Street. It, too, suffered the fate of the Penn Mutual having been demolished years ago.

*In the architecture of iron and steel framing, the Great Northern Hotel was undoubtedly Root at his best. The technical and aesthetic principals of Chicago construction were there adapted to the requirements of a hotel building that revealed simply and powerfully the soundness of those principals.*⁹⁶

Great Northern Hotel

Chicago

Burnham & Root, Chicago

1891

Once rising on the architecturally rich South Dearborn Street was this venerable skyscraper. Few hotels during the nineteenth century stood as tall as the Great Northern, 17 floors, 176 feet. And even fewer, then, sported a giant sign on its roof so that everyone in the great prairie city of Chicago could see where the landmark hotel was.

The Great Northern Hotel was a massive brick box that measured 165 by 100 feet. This giant rectangle opened to the east as it rose to form a C in plan. A large courtyard, with an exquisite iron and glass canopy above, featured wrapping corridors and delicate chandeliers. Six passenger elevators served the Great Northern Hotel's 500 guest rooms and its eight dining rooms. A steel and wrought iron skeleton, with diagonal tie-rods for wind-bracing, provided the building's support. Original cost of this enterprise was \$1,150,000, a truly staggering sum for that period. The Great Northern's exterior walls appeared butter-smooth and sinuous. They were devoid of overt ornamentation and pointed the way to twentieth century modernism. In 1940, after standing for almost a half century, one of the greatest Chicago School skyscrapers – this one a hotel – was demolished.

Manhattan Building

Chicago

William Le Baron Jenney, Chicago

1891

The south end of downtown Chicago was a flurry of construction activity throughout the mid-1880's and into the 1890's. Skyscrapers rose as sheaves of wheat, stacked near to one another casting shadows as they reared up. Charles C. Heisen (1854-1945), a real estate developer, was responsible for many of these "shadow casters." This German-born businessman sponsored the construction of the seven-story Temple Court Building

(1887), the nine-story Como Block (1887), and the thirteen-story Monon Building (1890) among others.⁹⁷ His tallest venture and his most celebrated development would rise in 1891, the Manhattan Building.



(93) Manhattan Building. Photo by author.

Heisen assembled four small adjacent parcels into a mid-block site on Dearborn, between Congress and Van Buren Streets. His new skyscraper would be wedged between a seven-story building to the north and the Como Block to the south.⁹⁸ Its footprint was planned at 150 feet north-to-south along Dearborn and sixty-eight feet east-to-west toward Plymouth Court. On June 7, 1889 a building permit was issued by the city of Chicago allowing construction to commence. Some two years later the city became the recipient of a wonderful new tower, the Manhattan Building. This new skyscraper, costing \$850,000, contained 600 offices and featured three retail stores on the first floor and five hydraulic passenger elevators. Its lobby was embellished with marble mosaics, polished marble and jasper wainscoting, bronze and copper fixtures, and ornamental ceilings. The Manhattan Building quickly became the favorite of renters involved in the printing and publishing trades with "manufacturers' agents" also vying for clerical and administrative space. It ranked as Chicago's fifth tallest building standing sixteen floors, 208 feet high.⁹⁹

Heisen's "investment" possessed a complete metal frame of cast iron columns and beams and wrought iron girders.¹⁰⁰ This skyscraper pioneered the use of wind bracing, the inclusion of extra braces and girders – laterally and diagonally – to provide more rigidity for the whole of the structure in tall buildings. Because of its slab-like configuration and its relative thinness extra framework was required for stability; The Manhattan was

the first skeletal frame building in which wind bracing was employed. William Le Baron Jenney and his structural engineer, Louis E. Ritter, pioneered the concept here.

Another innovation by Jenney and Ritter was the inclusion of setbacks on both the north and south ends of the structure. The building rises a full ten floors then retreats inward leaving the mass of the slab to continue up to its full height of sixteen stories. The "ends" were thus lightened for Jenney feared that the structure's massive weight, resting hard against the neighboring buildings, might in some way cause damage to them; This was Jenney's tallest building and at sixteen stories there were many unknowns then. To further mitigate possible structural damage these floors' "ends" were cantilevered supported from deep within the Manhattan's structure. Instead of "challenging" the integrity of its neighbor's walls and foundations the Manhattan managed to gently insert itself in between them.

The Manhattan Building's first three floors are faced with gray granite with the remaining floors wrapped by brown brick. Exterior decoration is provided in the form of buff-colored terra-cotta that features cherubic faces, foliate patterns, Renaissance-inspired capitals, and other trimmings. Architecturally, the primary visual treat is provided by the fenestration patterns - especially the pronounced window bays. Centered on the façade and reaching from the fifth to the eleventh floor is a grouping of twenty-one three-sided bay windows. Flanked on either side and serving floors four through eight are fifteen rounded window bays. Altogether these fifty-one "events" make for a lively and animated façade. They relieve the mass from the possibility of abject boredom and offer an almost Baroque response as they engage the space around the building itself; the resultant shadows that skirt across the wall are simply delightful.¹⁰¹ Unfortunately an ill-conceived and visually burdensome cornice "supported" by fanciful capitals mars whatever upward progression there might otherwise have been on this quirky façade. One final, and discordant, flourish occurs at the fifteenth floor with a window arcade that spans the full width of the building.

Heisen, original owner of the Manhattan Building, sold it in 1907.¹⁰² It is unknown whether Heisen understood that the Manhattan Building was more than a money generator, that it was so much more. Here was an assertive and optimistic building, a structure that was designed with the future in mind – a pioneer of sorts. The Manhattan Building is a survivor that now stands amid many vacant parcels, asphalt-covered lots where once stood the Caxton, the Temple Court, the Como, and the Monon.

*Although the Leiter Building seems to be the first of the high buildings to exhibit the trend toward the use of pure forms, it is today almost unknown, except to a handful of specialists. Its importance consists not in its height – which happens to be of eight, rather than twelve or twenty stories – but in the identity between what is expressed in its construction and in its architecture. The Leiter Building marks a starting point for this kind of architectural purity and should not be ignored in the history of architecture.*¹⁰³

Second Leiter Building

Chicago

Jenney & Mundie, Chicago

1891

The Second Leiter Building was conceived and constructed as a speculative department store, a money-making vehicle borne in the mind of one of Chicago's great early entre-

preneurs, Levi Ziegler Leiter (1834-1904). Leiter arrived in Chicago in 1854 and learned the retail dry goods trade. Just following the Civil War Levi Leiter formed a very successful business partnership with Marshall Field which provided great wealth to both men. In 1881, Leiter sold his interests to Marshall Field and embarked on an enterprising career in real estate development.

As early as 1879, Leiter constructed his *first* speculative building, a seven-story office and retail structure designed by William Le Baron Jenney. This was an important landmark whose street walls were predominantly glass. Structurally it was of mill construction embodying timber joists and girders carried by cast iron columns. Thin brick piers segmented the facades into honeycombs of glassy openings which allowed sunlight to spill into Leiter's downtown Chicago "investment." Here *purpose* and *structure* were melded into a modern masterpiece that was demolished in 1972. Before long it would be repeated.



(94) Second Leiter Building: A bold and modern composition. Photo by author.

Levi Z. Leiter acquired a large parcel on the east side of State Street that stretched between Congress Parkway and Van Buren Street, and in 1889 Leiter commissioned Jenney again to produce plans for a giant retail store at that location. The result was impressive indeed and measured 402 by 144 feet, the equivalent of fifteen acres of floor space. The building possessed twelve passenger elevators, six freight elevators, eight floors, and stood overall 133 feet above the sidewalk. This "box" would clearly serve the purposes of the giant retailer Siegel Cooper and Company and it was eagerly leased by them and employed as their flagship store. Siegel Cooper became the classic big-city retail emporium here housing "...sixty-five different kinds of stores, a bank, restaurant, butcher shop, telegraph-office, employment bureau, dentist's office, doctor's office, barber shop, and a hairdresser for ladies. It is claimed that this is the largest retail estab-

lishment in the world." The Siegel Cooper Store was visited by thousands each day and was staffed by 2,000.

Design-wise the Second Leiter Building was proclaimed "Jenney's triumph" by architectural scholar Carl W. Condit.¹⁰⁴ That accolade is both significant and accurate, for here Jenney most closely approaches a minimalist aesthetic that indeed eliminates the insignificant. By contrast the façade designs of his Home Insurance Building and the Fair Store seem at best, awkward. With the Second Leiter Building there exists a sophisticated arrangement of solids and voids – walls and windows. There is an organic relationship between pedestrian, customer, employee, internal function, and sunlight. Skirting references to traditional design in the forms of banded columns and neo-Romanesque capitals exist, true enough, but they no not drive the overall design. They appear as only vague memories of a distant and inglorious past. What will always be the hallmark of the Second Leiter Building is its great and open expanses of glass, openings generously flung between the structural supports of the building itself, delicate membranes glistening in the setting sun of the south Loop. Conversely, the solids demand attention: eight-story elevations express the structure of the building through the employ of white Maine granite as a wrapping for its smooth spandrels, columns, and pilasters.



(95) Second Leiter Building: A bold look back. Photo by author.



(96) William LeBaron Jenney (1832-1907) Jenney was a structural innovator and one of the founders of the Chicago School of Architecture. Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 876.

The Second Leiter stands by means of a grid of iron and steel columns, beams, and girders allowing, for the first time anywhere, for no self-supporting walls - anywhere.¹⁰⁵ Sometimes referred to as warehouse construction, the Second Leiter was laid out with wide bays and very high ceilings to facilitate the movement, storage, and display of a wide variety of goods. Broad "avenues" separated display counters, furniture arrange-

ments, and shelves of clothing and dry-goods and could easily be threaded through the building's structural system of thin metal columns. Large crowds, too, could efficiently negotiate the store's floor plans for an optimum shopping experience. In short, here purpose and structure are melded into a modern masterpiece.

The Siegel Cooper Store was the first to occupy the great Leiter enterprise but it was not the last. By the 1930's the "flagship store" of Sears, Roebuck and Company came to occupy the Second Leiter Building and where it remained until 1986. Still standing, the Second Leiter Building reminds all who its builder and first owner was, its State Street parapet is emblazoned with "Levi Z. Leiter."

*But it was the tower, and not the amphitheatre, that made the Garden a success – as a building and as a symbol of gaiety in a world of cross-purposes and complaint.*¹⁰⁶

*The instinct to climb up to some high place, from which you can look down and survey your world, seems to be a fundamental human instinct.*¹⁰⁷

Madison Square Garden Tower

New York City

Stanford White, New York City

1891

This building quite simply had to be – it had to exist and function as a great interior lighthouse, an urban marker whose purpose, among others, was to identify where the "most magnificent amusement palace in the world" was. The Tower stood close to the corner of Madison Avenue at Twenty-Sixth Street and just within the confines of Madison Square Garden. Here was a spirited skyscraper that did not take itself too seriously; after all, this was a "fun" building, an escapist venue for middle class New Yorker's. It was called elegant by some, but to others the Tower was simply a clumsy attempt at architectural showmanship. To most though, it was a thing of sheer delight and whimsy that captured the imagination of children and adults. Its height alone seemed magical.

Madison Square Garden was a multi-function facility that featured amusements as diverse as circuses, rodeos, political conventions, holiday pageants, boxing matches, and large events of all kinds. It opened to much fanfare on June 16th, 1890. The huge building, measuring 465 by 200 feet occupied an entire block – more than two acres. Its amphitheater, measuring 167 by 277 feet, boasted a seating capacity of 17,000 and was its largest "room." A theater, a concert hall, a large restaurant, and a rooftop cabaret held thousands more. The Garden was a complicated enterprise of grand proportions with no false modesty. It was declared "absolutely fireproof throughout" by its promoters while the *New York Herald* proclaimed "there is probably not in the whole world a handsomer building, nor any more exquisitely proportioned." Architecturally, the complex was heavy-handed, ponderous, and positively earthbound. Still, one novelty surpassed all others – the Tower.

The Madison Square Garden Tower was under construction simultaneously with the entire development but it was completed much later, on November 2, 1891. Architect Stanford White (1853-1906) designed the Tower modeling it after the *Giralda*, a fifteenth-century, Spanish bell tower adjacent to the Cathedral of Seville.¹⁰⁸ There were critics though, and they wondered - some out loud - why an architect so celebrated as Stanford White would intentionally mimic such a culturally remote building as the *Giralda*. Though magnificent in a quirky sort of way, the Tower did shimmer in the sunlight, what with its

yellow brick walls trimmed with white stone and terra-cotta. The past, the Spanish past, was reborn.



(97) Madison Square Garden Tower

Though looking a bit dated, the Tower of Madison Square Garden stood sixteen floors tall and 304 feet into the sky. This was New York's second tallest building trailing the 1890-completed World Building which rose twenty-three floors, 309 feet. Five feet in this skyscraper game of one-upmanship was considered a gulf; every inch counted.

The Tower's grand opening took the form of a nocturnal extravaganza. The evening's celebration was capped with an unparalleled fireworks and light show featuring over seven thousand incandescent light bulbs with two powerful searchlights trained upon the tip-top-mounted statue *Diana*. As never before, a skyscraper, the monument of the age, was inexorably linked to light, not natural but manmade. Though a "copy" of a centuries-old structure this skyscraper was considered by most pedestrians to be a modern monument simply by virtue of its *electric* lights. The Garden and its Tower were con-

structed at a time when most households were lighted by gas. Each dusk found the tower brilliantly bathed in white light that was provided by hundreds of incandescent lamps. In the 1896 *New Catechism of Electricity, A Practical Treatise*, a romantic image features the Madison Square Garden Tower as the focal point of bursts of white light exploding from its surface with the caption "To Illustrate Arc Lighting."¹⁰⁹ The public was fascinated. This skyscraper was a signboard having more to do with advertising itself than with the polemics of architectural form or dusty theories of Greek temple proportions. It was mentally accessible – by everyone. Evening strollers along the Brooklyn waterfront, dock workers in Jersey, and boat captains in the Bay could spot the lighted shaft of the Garden. Here was "architectural democracy" in action, here was a building for and of the masses beckoning all to partake of the entertainment inside. Simply, enjoy!

This odd skyscraper, measuring thirty-eight feet square, was composed of multiple structural systems. Its walls, from grade to below the lowest loggia sixty-five feet up, were load bearing and were supported by a thick concrete slab. Walls of this masonry section were twelve feet thick at its base eventually tapering to some three-feet. The remainder of the Tower was constructed of steel wrapped with brick and terra-cotta. Inside, lower floors were tied into the public spaces while above were seven floors devoted to apartments. Topping these were more public accessible-floors. Two elevators raced up and down the core of the Tower depositing visitors to the lowest loggia level. From there a spiral staircase allowed those daring enough to navigate its multiple observation floors above. The highest point was located just below the feet of Diana.

Statuary, especially of semi-clothed or unclothed females, has been a part of western architecture for many centuries, so when it was announced that a statue of the Roman goddess of hunting and sport, *Diana*, was to occupy the highest point of the Tower, few raised any concern. What was produced by one of the most preeminent sculptors of the day, the English-born Augustus Saint-Gaudens (1848-1907), revealed a little too much according to some. Its unveiling and positioning atop the Tower in September 1893 was marked by controversy, mostly unwarranted. The statue, a hollow copper figure/weathervane, measured eighteen-and-one-half-feet tall. *Diana* stood upon pointed toe, was poised with bow and arrow, and occupied the second highest point in Manhattan. After only a few months both architect and sculptor agreed the likeness was, ostensibly, too large for her perch and she was removed and shipped to Chicago. A smaller and "better-dressed" figure was her replacement.

Despite its height, novelty, and instant recognizability the Garden was threatened with demolition in the mid-1920's. New York had changed. The whole Garden complex was deemed archaic and its balance sheets were splashed with red ink. Perhaps worst of all, it stood in a neighborhood increasingly eyed for corporate headquarters' buildings. Enter the New York Life Insurance Company. This corporate giant owned Madison Square Garden since 1916, and now sought demolition. The Democratic Convention of June 1924 was considered the Garden's swan song. The year 1925 brought its closing and swift demolition. New York Life began construction on a skyscraper twice the height of that which it replaced. For thirty-four years the Madison Square Garden Tower stirred the imagination. It lifted itself into the sky, and with it, countless visitors – patrons who previously only viewed New York through the dirty glass windows of a third-floor walkup. The Garden's skyscraper, and its urban contribution, must not be trivialized, instead, remembered for its great height and the enjoyment it once brought.

Root's favorite building was the one he called Jumbo, the Monadnock Block¹¹⁰

The Monadnock, oddly, is not a steel-frame building; it is the last of the great solid-masonry-walled structures, yet it is a skyscraper as surely as any of Sullivan's works.¹¹¹

Monadnock Block

Chicago

Burnham & Root, Chicago

1891

Holabird & Roche, Chicago

1893

The Monadnock Block is a masonry masterpiece; it is assertive...but gently. It grows from a blocky base and rises gracefully, first inward, then at the top outward ever so slightly. Here, brick walls are transformed into visual poetry, the whole of the building deriving its beauty from the building's *form* alone. It is a building of extraordinary finesse.

This skyscraper, a hybrid of sorts, is one of America's most important architectural landmarks due principally to its modes of construction, design philosophy, and relative height. The Monadnock Block is actually two skinny and connected office buildings that run north to south along Dearborn Street in Chicago's Loop. The north half was completed in 1891 and employs load bearing exterior walls only; the south half of 1893 stands by means of a steel skeleton - all weight borne by a metal framework that utilizes no load bearing walls whatsoever.¹¹² Early modes of tall building construction aside, the Monadnock Block is also an example of outstanding façade design. Here, with the north portion, architect John Wellborn Root bestowed upon Chicago the very essence of height without fuss and gave the world the ultimate minimalist skyscraper of the nineteenth century. Clean-lined and tall, the Monadnock Block was briefly the tallest in Chicago, a city destined to possess many "tallest" claimers.

The Monadnock Block was the brainchild of two brothers, real estate men from Boston named Peter and Shepherd Brooks.¹¹³ A parcel in the South Loop was acquired by Peter Brooks as early as December 2nd, 1881 for eventual development. During the design phase of the project the Brooks' brothers and Root exchanged telegrams outlining the building's height, size, and most of all debating the merits of this detail or that, of this "look" or that appearance. The rules of the architectural game were established by Peter Brooks – he insisted his building have plain, simple facades demanding that Root provide "no detail" whatsoever. Root responded and won the game. What was finally executed was not a compromise of compromises as is too often the case, then and now. What was executed was a powerful architectural expression borne in the mind of John Wellborn Root – alone.¹¹⁴

On June 3rd, 1889 a construction permit was obtained for the Monadnock site immediately after which site clearance commenced. The pencil-shaped site from which the Monadnock Block would grow was not unlike the rest of Downtown Chicago. Beneath it was soup. Multiple soil types, clays, quicksand, and wet gravel proved to be a formidable base upon which to stand a sixteen story brick box. To best come to terms with these conditions Burnham & Root decided upon something called a "raft" foundation. After proper excavation and removal of sludge and improper soils and sand, successive layers of concrete interlaced with steel beams were laid down. This waffle-like system provided for an immensely strong and solid "table" upon which to build. With foundation and

substructure complete the skyscraper's superstructure began to rise.



(98) Design simplicity and implied strength epitomize this skyscraper. Photo by author.

The Monadnock Block was designed to employ only load bearing exterior walls of brown pressed brick. Office floors were carried by steel beams that rested within pockets provided by the thick walls. All outside window lintels were of cast or wrought iron. Interior steel columns also carried the floors and aided in framing interior spaces for use as staircases, elevator shafts, and the like. Massive steel girders laced throughout the structure provided the necessary portal bracing as reinforcement against wind. As one might expect the wall's base would, by necessity, be the thickest as it was required to shoulder the most load. Logically, then, as the wall rose it also thinned. But, how thin, and how thick? First floor walls measured six feet thick while at the sixteenth floor walls measured eighteen inches thick, a 75% reduction in thickness over 215 vertical feet.¹¹⁵

The Monadnock stood sixteen stories, 215 feet, and measured 200 feet north-to-south, seventy feet east-to-west. Eight passenger elevators were arranged in two banks, while nearby two iron staircases rose to rooftop skylights. First floor stores opened onto the sidewalks and to the indoor corridors, hallways wainscoted in expensive woods, floors of marble, and ceilings and walls sporting brass chandeliers and sconces.

But it was not the marble and brass that caught the eyes of the public, the press, and the architectural establishment. It was the building's overall exterior design. To be sure no one had seen anything quite like it, a skyscraper so severe and without any applied ornamentation. No European historicism here, only a hint of the Egyptian. From the sill level of the second floor emerged brick walls that swept inward fifteen inches, gracefully gliding upward where they subtly flared out as they touched the sky. Added plasticity was

provided by three-sided bays rippling along street-front walls and building corners with progressively broadening chamfers. The sweeping profile of the Monadnock Block's north elevation was designed as a stylized interpretation of a lotus, a bud-shaped Egyptian plant. This, perhaps Root's most unique opus, was nothing less than architectural magic and offered a touch of the exotic to eyes accustomed to facades of plenty.



(99) The skyscraper as fortress stands as the result of mathematics, engineering, and millions of bricks. The monster Monadnock does not confront the sidewalk it gently addresses the concrete leaving a tiny seam; its touch is humane. Photo by author.

In 1894, the celebrated architectural critic, Barr Ferree, wrote of the Monadnock Block:

For the design is monotonous, as must necessarily be the case with any façade which, as this, includes 389 windows of the same size and shape, unrelieved by moldings, hoods, or sills. Graduates of the Ecole des Beaux-Arts will doubtless tell you there is no design in this, that it is only a passable piece of engineering, with all the unartistic [sic] solidity of typical engineering work. Yet such a criticism – unfortunately not confined to Beaux-Arts men – only means that the conditions of the building have not been understood. It is of unusual height and its longest side is of unusual width; it is intended solely for commercial purposes; it is not a monument devoted to artistic ends. It would not have made it a better building for its purpose to have strewn its fronts with columns and entablatures, or to have spread decorations around its windows; on the contrary, things would mean an added cost without an added utility...Perhaps, after all, it is a question of taste or of appreciation, but there is a dignity and strength, and impressiveness and power, in the simple, bold design of the Monadnock which is not to be found in the riotous designs in which variety and change are the leading elements.¹¹⁶

By 1893 the planned south half of the "complex" was completed. Designed by the prominent Chicago firm of Holabird & Roche, the Monadnock South held no fascination for the public. It was a fine example of Chicago School architecture, true enough, but it lacked the playfulness, the uniqueness, and perhaps most of all the magic that its predecessor had; Root and the public already bestowed these qualities on the original. Still, it stood at seventeen stories, 204 feet tall and offered "first class office accommodations" to tenants.

Both halves of the Monadnock Block, despite their architectural differences, are not at odds with each other but act in concert. Today they are more or less seen as a single unit, a single landmark skyscraper, a narrow office building measuring 420 feet long by only seventy feet wide. In total the Monadnock houses 1,600 offices and has eighteen passenger elevators that cater to its 5,500 workers and 28,000 daily visitors. Thus, this skyscraper is fulfilling its ultimate destiny as a premier business destination, despite its style, structure, or lotus profile.

Girard Trust Building

Philadelphia

Addison Hutton, Philadelphia

1891

The Girard Life Insurance, Annuity and Trust Company resided in this office building, a powerful stone mass. It stood across from the Philadelphia City Hall, was nine stories tall, and with its tower stretched 180 feet into the air.

Its architectural style is unmistakable: robust facades, rough-hewn stonework, monumental arched entrances, medieval "bell" tower, and lively arcades mark this clearly within the Romanesque genre. The man responsible for this structure's design was architect Addison Hutton (1834-1916). As a young man Hutton learned his craft in the office of Samuel Sloan and sometime in the 1870's Hutton opened his own office in Philadelphia. The Girard Trust Building was demolished in 1926.



(100) Girard Trust Building. *The Cosmopolitan*. Vol.XI, No. 1 May, 1891 – October, 1891, "The New Philadelphia", The Cosmopolitan Publishing Company, New York, p.42.

(101) Betz Building

Betz Building

Philadelphia

William H. Decker, Philadelphia

1891

The Betz Building, eclectic and romantic, was one of Philadelphia's great nineteenth century skyscrapers. It was an office building that towered over most others (the City Hall was not completed until 1894) and was recognized as one of the city's most important business addresses. Architecturally the Betz was at once wonderful and visually delightful and it could also be judged inelegant and ponderous. The building was indeed a robust stone and brick pile that incorporated arched entries, pediments, banded columns, thin columns, stout columns, bay windows, oriel windows, pilasters, rusticated arches, and a multitude of carvings and statuary. In short, its walls were a virtual architectural encyclopedia, and that fact makes this building an excellent example of the skyscraper form peculiar to Philadelphia of the 1890's.

John F. Betz, the building's sponsor, employed the talents of architect William H. Decker (1856-1908) to design this thirteen-story office building as a speculative venture. In 1926, after standing only thirty-five years, the Betz Building was pulled down. The Victorian-age landmark bowed to the pressures of real estate and in its wake was erected the Art Deco-styled Lincoln-Liberty Building.¹¹⁷

Review Building

Spokane

Seaton & Ferris, Spokane

1891



(102) Review Building

Built, owned, and originally occupied by the Review (later Spokesman-Review), Spokane's morning newspaper, this building was, and still is a tall tribute to Romanesque-inspired architecture. In 1890, Spokane's population was just shy of twenty thousand. Though considered comparatively small, the movers and shakers of Spokane recognized the need to present to the city a building – a tall building - that somehow would give stature and prominence to their community. The resultant structure, a landmark by most accounts, was built downtown and was easily recognizable for miles. At eleven floors the Review Building was Spokane's first skyscraper.

The building's main entrance is directly under the prominent, but gangling, half-round tower. Red brick, trimmed with gray Montana granite, make up the Review's exterior walls. Deep, Ruskinian colors, steeply pitched gables, turrets, arched windows and rich materials make this a classic Victorian skyscraper.

Mining Exchange Building

Denver

Kirshner and Kirshner, Denver

1891

Billed as Colorado's first steel reinforced building, the Mining Exchange once stood on the southwest corner of Arapahoe and fifteenth Streets in downtown Denver. This neo-Romanesque landmark was one of Denver's first skyscrapers, and upon its dedication on November 18, 1891, the Mining Exchange was described as "The most beautiful and costly Temple of Trade in the West...the first edifice in the world wholly dedicated to mining interests." Constructed at a cost of \$450,000, the building rose seven floors, and sported a central tower of three additional floors. Some thirty offices occupied the upper floors of the building with a restaurant located on the seventh floor.

The Exchange's main entrance was marked by an impressive semi-circular archway flanked on either side by the life sized carvings of the heads of a bull and a bear, those being the traditional symbols of stock trading. On the red granite walls above were carved eight heads of Hercules and four gargoyles. Perched high above the building's central pavilion stood a twelve-foot tall, copper (gilded in 1935) statue of a Colorado prospector holding a silver nugget.

The Mining Exchange's first floor contained offices and stores, while the second housed the magnificent Exchange hall, a space devoted to the trading of mining stocks. The stock exchange trading room measured fifty by seventy feet and rose thirty feet high. Its style was neo-Romanesque, and it featured an elaborate wooden ceiling and paneled hardwood walls. Flanking the Exchange hall were rooms housing a telegraph office, offices for mining brokers, directors' rooms, and an exhibition room for the examination of specimens of the minerals of Colorado. Above was a gallery for visitors. Nearby were twenty steel vaults decorated with hand painted scenes and stair railings of elaborately designed wrought iron. Tragically, this Victorian-age extravaganza was demolished in 1963, a victim of urban renewal.

Woman's Temple

Chicago

Burnham & Root, Chicago

1892

Once fronting on Chicago's famed LaSalle Street was this office skyscraper, the Woman's Temple. This nineteenth-century extravaganza was the home to the Woman's Christian Temperance Union, one of the organizations that sponsored, among other things, Prohibition. American educator, social reformer, and strong advocate of woman suffrage, Francis Willard (1839-1898), founded the national organization and presided over the Union from 1879 until her death. It was here, in her last years, that she conducted her affairs and guided the movement for equality between men and women.



(103) Woman's Temple

The Woman's Temple was a skyscraper whose design harked back to the French Renaissance. Principally from the hand of architect John Wellborn Root, it bears a striking resemblance to the Chateau de Chenonceaux (1515-1523) which is *still standing* over the River Cher in central France.¹¹⁸ The Woman's Temple was a splendid work, a masterpiece that reveled in its attention to detail. Lower exterior walls were of rock-faced granite, battered, and exquisitely executed. The building's rounded corners were an ex-

emplar of brickwork – a masterful handling of the medium. Red-hued terra-cotta dripped, icing-like, from its eaves and belt courses.

Despite being one of Chicago's most delightful early skyscrapers its demolition occurred in 1926. The *New York Times* printed the following on February 20th, 1927:

Chicago Skyscraper, Aged 35, Worth \$95,000 Less Than 0

A 35-year-old skyscraper is worth nothing. A post-mortem of the razed Woman's Temple here has so revealed. In fact the building was worth \$95,000 less than nothing. That sum was the cost of demolition above the amount received from salvage of material.

"An office structure of the most modern design and most advantageous location may be so affected by obsolescence within thirty-five years that its demolition becomes an economic necessity...architectural design, construction, layout and equipment had depreciated 100 per cent."¹¹⁹

The Woman's Temple stood only thirty-four years. In 1926, the Chateau de Chenonceaux was 403 years old.

*Never have steel and "cooked earth" been more artfully wedded.*¹²⁰

*Certain critics, and very thoughtful ones, have advanced the theory that the true prototype of the tall office building is the classical column, consisting of base, shaft and capital – the moulded base of the column typical of the lower stories of our building, the plain or fluted shaft suggesting the monotonous, uninterrupted series of office-tiers, and the capital the completing power and luxuriance of the attic.*¹²¹

Wainwright Building

St. Louis

Louis Sullivan, Chicago

Charles K. Ramsey, St. Louis

1892

The Wainwright Building is a universally admired piece of architecture, a skyscraper that marked the beginning of modern skyscraper design. Nothing like it had ever been seen before - this is the progenitor.

This building began *not* in the mind of Louis Sullivan, but in the pocketbook of a wealthy St. Louis brewer and businessman, Ellis Wainwright (1850-1924). He was president of the Wainwright Brewery Company (founded by his father Samuel Wainwright). In 1889, Wainwright consolidated his brewery with a brewing syndicate and formed the St. Louis Brewing Association. He became president of the Association, and with that role came increased wealth and civic influence. One thing was still desired by Wainwright, suitable office space from which to manage his business empire. A downtown parcel on the corner of Seventh and Chestnut streets was purchased, and in early 1890 an announcement was made by Wainwright that he would construct an office building to house his business concerns, including the St. Louis Brewing Association, with the rest of the space to be let out to tenants.



(104) Wainwright Building

By the end of November 1890 it was announced the Chicago architectural firm of Adler & Sullivan would design Ellis Wainwright's planned skyscraper. Local architect Charles K. Ramsey (1845-1913) would play a supportive role.¹²² The result of their collaboration was completed in 1892 and was instantly hailed a masterpiece of commercial design. The Wainwright reared up over most of St. Louis, it stood ten stories tall, 135 feet high. The new skyscraper boasted a complete steel frame, contained 225 offices, and was served by four passenger elevators. Its facades consisted of red-orange Missouri granite, red-orange terra-cotta, and large sheets of window glass. But it was the building's proportioning systems, choice of materials, and overall composition that made this skyscraper unlike any other.

Symbolically the Wainwright Building is a stout classical column and, perhaps, *the first tripartite skyscraper*. And like a classical column, the Wainwright has a clearly defined base (its first two stories), a shaft (the building's middle seven floors complete with "flutes"), and a "capital" symbolically represented by the tenth floor's circular windows and the profuse detailing in the form of leaves, just like a Corinthian column.

Knitting together the verticals of the facades are the terra-cotta spandrels. There are six variations, one type per floor. Each panel is symmetrically composed and features a complex, high relief, foliate pattern. Window openings seem to float between the spandrels, and with the brick piers, the street facades seem locked into an exquisite state of equilibrium. Minus the veiled reference to a classical column, no other allusion to antiquity was appropriated with the Wainwright Building; a new building type with a new language for a new culture was the way Sullivan reasoned:

So, when we ask an architect to build a twenty-odd-story office building, and he throws up a swaggering mass of Roman remnants, he is not a scholar but a brute.¹²³



(105) Wainwright Building façade: A work of genius. Photo by author.

The Wainwright was a thoroughly modern American skyscraper, no doubt arresting to the nineteenth-century eye and the architectural sensibilities of the time. No matter, it was popular with the people and the critics reacted favorably upon its completion. Ellis Wainwright, too, enjoyed the building but one can only speculate if he realized that it was indeed a masterpiece. In 1924 both Wainwright and Sullivan died. The former was buried in the landmark tomb that Sullivan had designed years earlier for Charlotte Wainwright, Ellis' wife, and located in Bellefontaine Cemetery in St. Louis.

The Wainwright Building was not Adler & Sullivan's first or tallest skyscraper, but it certainly was one of their most celebrated. It stands today as a timeless gift from the past, a precious architectural element in downtown St. Louis, a reminder of what can be accomplished with the sensitivity and insight of a genius.

Brooklyn Eagle Building

New York City

Ralph E. Leff, New York City

1892

Until 1955 the Brooklyn Eagle newspaper building stood on the corner of Washington and Johnson Streets in downtown Brooklyn. Here was once the headquarters of the most popular Brooklyn daily, a newspaper that was founded in 1841 and boasted the likes of poet Walt Whitman as editor from 1842 through 1848. It was from this site, just three blocks from the Brooklyn approaches to the borough's most famous bridge that rose the tallest building east of Manhattan Island.

Upon the building's completion in 1892, Brooklyn was a separate and, in many ways, a distinct city from its larger sister to the west, New York. Brooklyn's population then stood at 838,000. With consolidation in 1898, Brooklyn ranked second most populous borough after Manhattan, but since 1930, Brooklyn has held the title of most populous. Throughout the decades, the generations, the changes, there was one constant, the impetuous Brooklyn Eagle and its magnificent gold-domed skyscraper.

It was only fitting that the Brooklyn Eagle, a widely respected, widely quoted, and widely read daily newspaper erect the most imposing skyscraper in the city. A somewhat enigmatic architect by the name of Ralph E. Leff was contracted to produce the plans. The results were impressive indeed. An eight-story block was surmounted by a two-story tower that anchored one corner. A gilded dome capped the tower, and in turn, it was topped by a 200-pound bronze eagle with a wingspread of sixteen feet. The building was laid up with orange brick and a similarly colored terra-cotta. The impression the building conveyed was one of respect and sobriety. Many of its architectural features hearkened from the Baroque – a columnar entrance, four-story pilasters, arched and round windows, vase-shaped balusters, a heavy cornice, a tension-filled tower with dome, giant urns and a multitude of carved images. Bronze statues of the paper's namesake stood vigil, paired above the main entrance and stationed at the building's corners.

The Brooklyn Eagle's offices were tamer. They featured high ceilings, wide plank hardwood floors, electrically lighted chandeliers and glass-walled offices complete with tilting transom windows. First floor public areas displayed colorful mosaic tile floors, marble-topped counters and twenty-foot tall Ionic columns that rose to meet an impressive coffered ceiling. At its height this skyscraper housed 630 employees.

The Brooklyn Eagle's headquarters rose in the middle of one of the world's largest and most diversified urban centers – Brooklyn, U.S.A. Across the East River, in *the other* urban center, one could gaze upon the skyscrapers erected by a variety of daily newspapers, the Tribune, World, Sun, Times and Staats Zeitung, but they were not *The Eagle*, and they were not "of Brooklyn." The hometown favorite's last paper was published on March 17th, 1955. The demolition of the newspaper's skyscraper began in July, and by 1956 the Brooklyn Eagle Building was no more.

Fair Store

Chicago

Jenney & Mundie, Chicago

1892

The Fair Store was brutally remodeled in 1965 and brutally demolished in 1985. Still, for ninety-three years this structure stood as a landmark of the Chicago School of architecture, and in a more populist vein it existed as an emporium of reasonably priced merchandise. In its heyday it was daily visited by tens of thousands and was easily reached by horse-drawn trolleys (later by electric trolleys), buses, the elevated train lines, and the subway. This was, for many, the very heart of Chicago.¹²⁴

During the 1890's a host of large retail buildings were produced in Chicago, but none were on par with the Fair Store. This building was a giant department store in the form of a skyscraper, not necessarily unique, but statistically impressive. The Fair Store stood eleven floors, 165 feet and it reigned as *the largest* retail establishment in the city with total floor space of 810,500 square feet, or nineteen acres. Its footprint measured 190 by 350 feet, and by volume it contained a staggering 13,632,500 cubic feet. A visit to the Fair Store was not just a shopping excursion but an adventure. It boasted twelve passenger elevators which allowed shoppers to explore 100 retail departments. The Fair employed 2,500 and in many respects was-a-city-within-a-city; it billed itself as "the cleanest, best constructed, well ventilated daylight store in the world."

Built at a cost of \$3 million, the building was not as architecturally distinguished as the nearby and contemporary Second Leiter or the later-constructed Carson Pirie Scott Store. William Le Baron Jenney (1832-1907) and his business partner William B. Mundie (1863-1939) did design an engineering marvel in the Fair Store. Their department store employed a concrete raft foundation strengthened with iron rails which supported a skeleton of iron columns, beams, and girders. Also employed were concrete floors and fireproof tile arches set between the floor joists. With the Fair Store, and to their credit, Jenney and Mundie included modern concepts of structural engineering for the safety of store employees and store patrons alike.

Unfortunately the facades of the Fair Store were timid architecturally and were a missed opportunity from a design perspective. Certainly all street walls clearly revealed an inner metal structure and boldly expressed their character as a curtain wall. But when closely examined these elevations were decorated with Renaissance detailing in the forms of rusticated spandrels and pilasters of stone and terra-cotta. Above spanned cornices which recalled those of the fifteenth century. Intermediate belt courses at the fifth and sixth floors add more confusion to what could have been a truly powerful architectural expression. Fussy facades notwithstanding, the Fair Store was superior to almost any other of this country's department stores in 1892 as a piece of architecture and as a piece of avant garde engineering with its metal frame and fireproofing.

Oregonian Building

Portland

Reid Brothers, San Francisco

1892



(106) Oregonian Building

This office building was home to the *Oregonian*, the oldest continuously published newspaper on the west coast having been founded as a weekly on December 4, 1850. The newspaper's skyscraper, designed in a Romanesque or Norman style, was Portland's tallest and stood twelve floors, 194 feet above the sidewalk. The building was faced with brick, terra-cotta, and 12,000 cubic feet of Arizona sandstone. Its distinctive foursquare tower featured four clock faces and a public observation floor marked by balconies. In 1949 the newspaper vacated its landmark tower for a newer facility. One year later the Oregonian Building was pulled down.

Pabst Building

Milwaukee

Solon Spencer Beman, Chicago

1892

When the Pabst Building was completed Milwaukee was the nation's sixteenth largest city having a population just over 204,000. It was an industrial, tanning, and shipping center as well as a center for the brewing industry. It was not, however, a center of major corporations, banks, exchanges, government offices, nor was it a hotbed of real estate.

Certainly civic and local institutions were clustered in downtown Milwaukee but there were few in the leagues of those elsewhere. Milwaukee was *big*, but only for Wisconsin.

Although many companies called Milwaukee home almost none of them located their headquarters downtown. Factories, mills, tanneries, shipping companies, and breweries insisted their headquarters remain "at the plant." Consequently, this strange attitude resulted in a rather lackluster skyline where only a few skyscrapers were constructed. One of those skyscrapers was the Pabst Building. It was completed for \$350,000 by the brewery king, Frederick Pabst (1836-1904) as a real estate investment – nothing more; even the headquarters of his brewery remained at *the brewery*.

After its completion in 1892, the 150,000 square-foot Pabst Building did lease-out in quick order to law firms, brokerages, restaurants, and some bankers. This, the tallest building in Milwaukee, stood fourteen floors, 235 feet to the top of its cupola. It was faced with limestone, tan brick and terra-cotta, and was the city's pride. Here was a robust design, a design recalling the architecture of the Flemish Renaissance with hints of the Romanesque sneaked in. The elevations were profusely decorated with carvings of angels, cherubs, foliage and heraldry, and accented with finials, and crestings. Steeply pitched roofs sported dormers, gables, and corner observation balconies. An eight-sided pyramidal roof housed four clock faces and supported an observation cupola ringed with garlands. Entrance was through the proverbial and highly-decorated stone arch. It was a magnificent Victorian-age pile, a delicious confection that was not to last. In 1948, the upper half of the Pabst Building was disfigured when all decorative elements were removed and its cascading tower was reduced to a clumping of geometric bunkers. Ostensibly, excessive weight coupled with structural problems was the reason. It remained in this deplorable state until 1980 when it was pulled down and its decorative walls, with their angles, were sent to a landfill.

*There is no building in Chicago which fired the imagination and enthusiasm, not only of our citizens but of the world, as did the Masonic Temple...The cause of its fame was its height.*¹²⁵

*Chicago had passed St. Louis in population and was proud. Its system of building had become known as the "Chicago Construction." It was pushing its structures higher and higher, until the Masonic Temple by John Root had raised its head far into the air, and the word "skyscraper" came into use. Chicago was booming.*¹²⁶

Masonic Temple

Chicago

Burnham & Root, Chicago

1892

The Masonic Temple was a true landmark skyscraper, one of the most noted business buildings of the age. Despite its beauty and size, despite its height and innovations, this grand old lady was demolished in 1939 without much battle or notice. At that time, in Chicago, damage was done to America. What shame was visited upon that city and upon us all. Arthur Rubloff, founder and owner of the "largest property brokerage and management firm in Chicago and one of the largest in the world," was the antagonist. A sad commentary on historic preservation in Chicago surfaced and was revealed by the following:

No hero to preservationists, Rubloff had also been responsible for the 1939 demolition of Burnham and Root's Masonic Temple Building, at the northeast corner of State and Randolph, to make way for an architecturally undistinguished low-rise building. When challenged on the point, Rubloff would respond that, in his opinion, the only old building in Illinois worth preserving was Abraham Lincoln's home in Springfield.¹²⁷

Such were the opinions of too many real estate men - and women - then, and unfortunately, still.



(107) Masonic Temple

If, according to the accomplished architect Louis Sullivan, the term "skyscraper" was born with the Masonic Temple, then the Temple should have been more highly regarded by Chicagoans – indeed Americans. Here was Chicago's tallest skyscraper, a record holder, an icon of the Gilded Age, and it was not saved. On the eve of the Second World War, the glory that was the Masonic Temple crashed to the ground. A monument of this caliber deserved a better fate. If it were standing today it would be regarded as a beloved Chicago landmark. The Masonic Temple would be of the greatest interest to the architectural community, to historians, to many others. Yet, there are few who remember

it, and those that do are a dwindling number. Mindless destruction has no place in our cities, and the wrecking of the Masonic Temple appears to have been totally mindless.

The Masonic Temple's cornerstone laying ceremony occurred on November 6th, 1890. After almost two years of construction the Masonic Temple was completed, on schedule, in 1892. This skyscraper was the home office of the Knights Templars and Masons Life Indemnity Company. Some of Chicago's Masonic lodges were also tenants occupying the structure's top four floors; these were private spaces and because of their loftiness were traditionally the most prestigious.

Upon completion the Masonic Temple was immediately hailed as Chicago's tallest building. It rose sheer from the sidewalk, 273 feet to the base of its steeply pitched roof. From that edge it measured another twenty-seven feet to the roof's ridge, its apex.¹²⁸ Standing twenty-two floors high and exactly 300 feet, the Masonic Temple became the world's *third tallest skyscraper*. Only New York's World Building at 309 feet, and its Madison Square Garden Tower at 304 feet, were loftier. True, the Temple had the most stories but it is not the number of floors that ranks a skyscraper – its *height in feet* does; those nine feet belonging to the World Building became mighty important in the race to the sky.¹²⁹ What is also significant in the annals of skyscraper history is that the Masonic Temple stood by means of a complete steel frame with a curtain wall exterior.

Noted world traveler and lecturer John L. Stoddard commented accordingly:

The wonders of Chicago cannot be enumerated or illustrated in any limited space. A volume might be devoted to them. Some of its buildings are noble specimens of architecture, the beauty and majesty of which would be more easily recognized and universally acknowledged but for the veil of smoke which mars to some degree their true effectiveness. Among the famous structures of Chicago, and one of the loftiest buildings in the world, is the Masonic Temple, at the corner of State and Randolph Streets. It is no less than *twenty stories high!* It requires an effort to look up to its roof, which is 265 feet [sic] above the pavement!¹³⁰

The "effort" was made, and often. The Masonic Temple was both overwhelming and charming. Many of Chicago's visitors, and indeed its own citizens, were farm folk. Farmers (visiting Chicago to purchase equipment and / or the "niceties" of life to sell grain to merchants, to meet with a lawyer, or others passing through by train) witnessed, perhaps for their first time, a skyscraper. And that which impressed them most was likely to have been the Masonic Temple. One can only imagine the awe. Here was a city unto itself, a big place. The Temple's footprint measured 170 by 114 feet, a much larger base than most skyscrapers then. It housed ten retail stores on the first two floors, a 2,000-seat restaurant in its lower level, and a staggering 543 offices on floors three through eighteen. Above, under the giant gables, were private quarters, double-height spaces for the Masons. Its very top was occupied by a public observatory, a public roof garden, and another public restaurant. The building was served by fourteen passenger elevators, two of which were labeled "express;" these two were believed to have been the *first* so designated – anywhere.

Climbing through the Temple's core was an immense atrium, an open space that was cordoned off from the surrounding corridors by highly decorative metal railings. The atrium was covered on top with a metal and glass canopy, an elongated-dome-structure that could only be seen from a distance. From the highest location inside one could peer

downward to the lobby's white marble floor. Each elevator lobby, formed by the arcing arrangement of the glass-walled elevator shaft ways, opened toward the atrium and a lovely internal staircase. Each car was also glass-walled, some cars facing directly east – out of the building – to Lake Michigan.

The Masonic Temple's exterior, a derivation of the French Renaissance, was as impressive as its interior. Its exterior walls were of gray granite and yellow pressed brick. It had a distinct tripartite arrangement, that being a clearly defined base, middle section, and celebratory top; with the Temple architect Root took this concept to its ultimate conclusion, perhaps the best example anywhere. In between top and bottom were the clean and unbroken piers that allowed the building to leap into the sky; their upward force was exhilarating. Each of two massive gables, stretching east-to-west, were punctured with a rank of seven smaller gables. Topside decoration was profuse.

With this skyscraper architect Root employed undulating facades, walls with three-sided-bays projecting only slightly from the "background wall" surface. These rippling bays were so shallow they could have been overlooked, especially if the viewer was at a distance. Their effect though could rescue a building from mediocrity by enlivening what would otherwise be considered a staid, perhaps even boring, container.¹³¹ With the Masonic Temple these are no less than the gentle waves of a masterpiece.

The original cost of this skyscraper was \$3.5 million, much of it devoted to the tenants' comfort. In the bowels of the skyscraper were the mechanicals. There were two engines of 500 horsepower each, eight steel boilers to heat the building, six dynamos supplying electricity, and eight large pumps for all the plumbing needs. The electrical apparatus weighed sixty tons and included fifty-three miles of wire. This was state-of-the-art for 1892.

On January 15th, 1891, long before completion of the Masonic Temple, its architect John Wellborn Root died. Root missed the plaudits, the earned praise from the press – especially the architecture press – and the sheer joy and wonderment this skyscraper brought to the public at large. The observatory was the goal of many. In 1909, that is all it took was two-bits, 25 cents and you were "above the clouds." A travel brochure of that time proclaimed "From this platform on a clear day an extended view of the city may be had." Some were carried away with the skyscraper and its altitude as evidenced by Edgar Lee Masters who penned that "from the top of which...one could see Council Bluffs, Iowa, 230 miles distant. I had to try that out, and Uncle Henry took me to the Masonic Temple."

Architect, professor, and architectural historian, Francisco Mujica wrote with conviction of the Masonic Temple:

With its 20 [sic] stories this was the first really important skyscraper in history. Designs and photographs of this building were reproduced in all countries of the world announcing that the birth of the skyscraper had taken place.¹³²

With such accolades, and with what seemed to be universal praise for the Masonic Temple - as a building and as a piece of art - it is difficult to understand the opinions of Arthur Rubloff, the tacit approval of the City of Chicago, and the subsequent demolition of this skyscraper. Was there really no alternative but demolition?

Ashland Block

Chicago

Burnham & Root, Chicago

1892

The Ashland Block was an absolutely delightful early skyscraper, a superior design that emerged from the prolific office of Burnham & Root. It was a robust structure, a building that reveled in its own height and plasticity. A rich red in color, it was easily recognizable along Clark Street, the thoroughfare it fronted, and it was visible throughout the Loop. This structure was faced with red brick and red terra-cotta, and its exterior walls undulated. Rounded bays rippled on the street facades and electrified the building's mid-section; it was tri-partite in organization. A grand "processional" arch marked its main entrance, and a perfectly scaled - yet pronounced - cornice capped the building. The Ashland Block earned for itself celebrity status due to its overall pleasing appearance, lively facades, its relative height of 200 feet, and as one of the progenitors of Chicago's *modern* architecture.

This skyscraper was constructed on the northeast corner of North Clark and West Randolph Streets, just across from the Court House, a grand structure filled with city, county, and state offices, and of course court rooms and jails.¹³³ Business days found the Ashland Block housing over 1,000 occupants including attorneys, bankers, bondsmen, real estate investors, insurance men, and stock brokers. The proximity to the Chicago Court House was most important to many of the Block's clients, and in turn to their clients.

Structurally the Ashland Block stood upon spread foundations and harbored a complete metal skeleton of iron and steel. It rose sixteen floors, had seven passenger elevators, 480 offices, and offered nine retail stores and shops on its lower floors. The Ashland's construction cost its builder and real estate developer, Robert Waller (1850-1899), \$850,000. Waller actually constructed the *second* "Ashland Block," as there was, on the same site, a building of the same name having been erected there in 1872 – a post-fire structure of some questionable architectural merit.¹³⁴ Robert Waller, a Kentuckian by birth, chose to adopt "Ashland" for his investment too, the moniker having been originally derived from the name of politician Henry Clay's Kentucky home.

The Ashland Block was destroyed in 1949 and replaced, astonishingly, by an architecturally mediocre bus station. Mercifully, that was raised for the Chicago Title & Trust Center (Kohn Pedersen Fox, New York City) which currently occupies the site. Completed in 1992, one century after Burnham & Roots Ashland Block, the Chicago Title & Trust's headquarters offers stark contrast to the previous wavy-walled landmark. Chicago Title's tower stands fifty stories, 756 feet above the corner of Clark and Randolph – almost *four times the height* of its red brick predecessor.

Nasby Building

Toledo

E. O. Fallis, Toledo

1893

The Nasby was Toledo's first skyscraper, and it was clearly its tallest building. It stood as an eight-story office block topped by an ornate five-story tower. Architecturally, the eclectic Nasby sported red brick walls enriched with oriel windows, decorative terra-cotta panels, balustrades, and urns. This building did not employ a skeleton of steel, but was a

load-bearing structure with a foundation of sandstone covered with granite panels.



(108) Nasby Building

The building's focal point, of course, was its tower. This lofty component's design looked to the Seville Cathedral (1184-98) of Gothic Spain for architectural inspiration. More specifically, the Nasby Building borrowed the architecture of the Giralda Tower, the Cathedral's Moorish-styled belfry, completed in 1568. The Giralda Tower rises 275 feet, while its 19th century "imitator" rose 161 feet. The very top of the Nasby housed no bells, but it was lined with electric lights. People throughout Toledo marveled at the lighted tower, a romantic, yet modern, nighttime landmark.

In 1934, the Nasby Building's five-story tower, which once housed the offices of its architect, E. O. Fallis, was removed due to being "insecure and unsafe." Further indignation was suffered, when, in 1964, the original building was re-clad in blue and white metal panels. Renamed the Security Building, there is no indication of the building's once-handsome appearance.

Columbus Memorial Building

Chicago

William W. Boyington, Chicago

1893

The Columbus Memorial Building was erected in the same year that Chicago hosted the World's Columbian Exposition, an extravagant international fair. The Exposition was America's way of celebrating the discovery of this continent by Europeans, and the Columbus Memorial Building was erected by Chicago businessmen as a way to celebrate free enterprise.

Standing fourteen floors, 251 feet tall, the Columbus Memorial was indeed a prominent landmark on the southeast corner of State and Washington Streets in Chicago's Loop. It was the home, almost exclusively, to physicians and jewelers, about 130 of the former having offices here.

*Columbus Memorial Building, Chicago.
Home of the Wholesale Jewelry
and Kindred Trades.*



(109) Columbus Memorial Building

This early skyscraper's facades were composed of stone, brick, terra-cotta and glass. Street walls rippled with window bays, while its main arched entrance was topped by a giant bronze statue of Christopher Columbus. The building's top erupted into a baroque extravaganza featuring an eight-sided tower complete with a public balcony.

Inside, the entrance vestibule was decorated with Columbus' three ships depicted in mosaic. Eleven bronze wall panels depicted scenes of his life. The entire entrance was trimmed with ornamental metalwork. Nearby the names and lives of Columbus and his commanders appeared in ceiling mounted mosaic panels. In an utterly wanton act, this delightful skyscraper was demolished in 1959.

Erie County Savings Bank Building

Buffalo

George B. Post, New York City
1893

Founded in Buffalo in 1854, the Erie County Savings Bank was by any measure quite a prosperous institution in that city. By 1889 the Bank saw fit to erect for its own concern a

new headquarters building, a skyscraper, in downtown Buffalo. New York architect, George B. Post, won an architectural design competition that gave him the commission. After almost four years of construction, the Erie County Savings Bank opened for business in its new building on June 28, 1893.

This new skyscraper stood nine stories tall on Main Street and ten stories tall on Pearl Street. It was faced with gray granite and it had a steel skeleton beneath its tons of stone wrapping. The building's second floor was configured as a mezzanine story, and above it were six full office floors. Two penthouse stories were tucked beneath its medieval-styled roof. In all, the building's foot print covered about 17,000 square feet.



(110) Erie County Savings Bank Building

There were 145 offices in the building. All the floors in the corridors were of marble, and those in the offices were of polished Georgia pine. The woodwork of the interior was of Mexican mahogany, and the stair treads were of marble with iron balustrades. All public banking areas were lavishly decorated and were fitted with red Lake Champlain, black Glen Falls, yellow Saint Baume, and white Tennessee marbles. A semicircular counter separated bank employees from the public and was pierced only by eighteen teller windows.

The building was heated by steam, as was common in those days, but was lighted by 1,400 electric lights, a nod to progress and a new invention. Inventor Thomas A. Edison (1847-1931) was chosen as the consulting engineer for the building's electrical installation.

The Erie County Savings Bank Building was a robust interpretation by George B. Post of medieval French or Spanish architecture. The solemnity of its granite walls and the aura of permanence that it suggests recall the castles of 12th century Europe. But here, with this office building, Post manipulated the stone and the walls as never done before. The

soaring arches that "protect" large glass expanses are a true tour de force. It is as if the stone wrapping grew to envelope some modernist glass-walled skyscraper beneath. The exterior walls can be likened to a collision of the centuries, a contradiction of aesthetics; peel those granite walls away and discover the glass box within.

This architectural masterpiece, topped with a roof of red tiles, finials, and iron cresting was savagely demolished in 1968.

Odd Fellows Temple

Cincinnati

Samuel Hannaford & Sons, Cincinnati

1893

The Independent Order of Odd Fellows is still one of the largest fraternal and benevolent orders in the United States. A charter for a lodge at Cincinnati was granted October 31, 1830, the first in Ohio. By 1886, Ohio counted 49,267 members of that state's Jurisdiction of Odd Fellows. On September 12th, 1891, the Temple's cornerstone was laid with great ceremony. In 1893, this gracious skyscraper, on the northwest corner of Seventh and Elm Streets - a site then valued at \$150,000, was completed as the home to the Cincinnati Lodge.



(111) Odd Fellows Temple

English-born architect, Samuel Hannaford (1835-1910), was responsible for the design of this romantic structure. He headed the Cincinnati-based firm of Samuel Hannaford & Sons, which he organized in 1887. His son, Charles Hannaford (1859-1936), was a native and life-long resident of Cincinnati. It was Charles who was responsible for the now demolished Post Office Building, once a landmark in downtown Cincinnati.

The Odd Fellows Temple stood 8 floors and it utilized steel cage construction. It measured 124 feet on Seventh Street and 156 feet on Elm. The first two floors were laid up with rusticated limestone. Above these were finely dressed limestone walls, steeply pitched hip roofs, gables, pointed arches, bay windows, and corner finials. Overall, the building's style was a hybrid of French Gothic Revival and the American commercial style with its large expanses of glass windows on the first floor.

The building not only served as the home to the Odd Fellows of Cincinnati, it also served as the home to other rent-paying office and commercial retail tenants and it housed the general offices of the Queen & Crescent Railroad System. The Odd Fellows Temple was demolished years ago.

Union Trust Building

St. Louis

Adler & Sullivan, Chicago

Charles K. Ramsey, St. Louis

1893

Commissioned by the Union Trust Company of St. Louis this still-standing skyscraper was one of many erected in St. Louis during the 1890's. This building was, and still is, an important piece of American architecture. It stands as one of two St. Louis skyscrapers designed by the illustrious architecture firm of Adler & Sullivan - the Union Trust's completion followed that of the Wainwright's by only months. Their construction was, more or less, simultaneous with the Wainright enjoying more accolades.

The Union Trust Building still stands on the northwest corner of Seventh and Olive streets in downtown St. Louis. The skyscraper's footprint originally measured eighty-four by 128 feet but was enlarged years later.¹³⁵ A two-story base supports thirteen office floors for a total of fifteen stories. The building is supported by a complete steel skeleton and is faced with buff brick and terra-cotta. The Union Trust Building was well known for its "collection" of giant, shield-bearing lions positioned at each of its corners; unfortunately they were removed years ago. A flat top belies its attempt to be modern.

The design of the Union Trust's facades reveals primary, secondary, and tertiary structural and architectural components. The masonry corners encase giant columns, continuous brick piers wrap smaller steel supporting columns, and masonry spandrels cover steel beams and decorate, enclose, and protect the building's interiors. Delightful circular windows marched around the building's second floor and identified the space used by the building's owner and builder.¹³⁶ Signaling the Union Trust's main entrance was a thirty-five-foot-wide pavilion complete with a marvelous compound arch; this is no longer and its replacement is forgettable.

Originally the building was equipped with six elevators, three hundred offices, and featured a rooftop observatory open to the public. The Union Trust Building cost \$750,000 to construct with the first floor devoted to commercial and retail business while upper floors were host to dozens of professionals.

Home Life Insurance Building

New York City

Napoleon Le Brun & Sons, New York City

1894

Founded in Brooklyn in 1860, this insurance company relocated to Manhattan in 1870, and finally in 1894, it moved its headquarters into this structure, its own skyscraper. The Home Life Insurance Building was among the tallest in Manhattan at the time of its completion standing sixteen floors, 280 feet high. The building's footprint measures fifty-six feet wide on Broadway, and reaches back 109 feet. The building contains a complete skeleton of steel and was advertised as a completely fireproof office building.

The Home Life Insurance Building's architectural style is of French Renaissance inspiration. This is a tripartite skyscraper with a clearly defined base, shaft, and crowning capital. The tower's thirteenth floor is marked by a prominent balcony and the fourteenth floor by an Ionic colonnade. Delicate and well-placed ornamentation has been lavishly applied to the building's Broadway facade. White Tuckahoe marble stretches from the building's base to its double-window dormer marking its top story. Above this rises its most distinctive feature, an elongated hip roof capped with iron cresting.

New York Life Insurance Building

Chicago

Jenney and Mundie, Chicago

1894

On the northeast corner of LaSalle and Monroe Streets in the heart of Chicago's financial district stands this sleeping giant. Often overlooked by more modern historians, the New York Life Insurance Building stands with all the grace and force once commanded by other long-lost 19th century skyscrapers. This building was the creation of one of the most prolific and inventive design teams then in Chicago, the firm of William LeBaron Jenney and William Mundie.

The New York Life Insurance Building was originally the Midwest home to the New York-based insurance company of the same name. This office structure rises fourteen floors, 165 feet above the sidewalk, and its footprint measures eighty feet along LaSalle and 142 feet along Monroe Street. In plan the building forms a backward C, its light court opens to the north. Each floor boasts almost 10,000 square feet of office space and the building is supported by a complete skeleton of steel.

Architecturally this early skyscraper employs all the trappings of Beaux-Arts styling. A strong three-story stone base helps sandwich a seven-floor midsection between it and a lavishly decorated three-story cap. An attic/penthouse floor rests far behind a balustraded parapet. Attenuated pilasters bind its top and bottom together and also march horizontally along both street fronts; dignity is achieved. The building's grand lobby is wrapped in white marble including two monumental staircases that carry visitors up to second-story shops and offices. Architectural richness continues in the building's elevator lobby which houses five passenger elevators still fitted with the original decorative brass doors. At the New York Life Insurance Building's opening in June 1894 marketing advertisements touted the fact that "on the 12th floor are placed the barber shop and toilets. Every office is provided with a wash basin." State-of-the-art office worker comforts were still decades away.

*A great building is so magnificently of its period and so perfectly expressive of the creative genius as conditioned by existing uses, beliefs, and technologies, that it transcends its time to become one of those historical signposts.*¹³⁷

*The exuberant Second Empire City Hall of Philadelphia has been appraised by a commission of the American Institute of Architects as "perhaps the greatest single effort of late nineteenth-century American architecture."*¹³⁸

Philadelphia City Hall

Philadelphia

John J. McArthur, Jr., Philadelphia

Thomas Ustick Walter, Philadelphia

1894



(112) Philadelphia City Hall

American cities of the 1870's and 1880's were replete with French Second Empire style structures. Public buildings such as post offices, court houses, and city halls were often executed in this heavy-handed style, but so too were hotels, hospitals and banks. It is this building, the Philadelphia City Hall that is the grandest, largest, and tallest of them all, a splendid "historical signpost." This is the north wing of the Louve with a tower.¹³⁹

Astonishingly, Philadelphia's City Hall and Chicago's "streamlined" Reliance Building were being completed in the same culture, in the same country, in similarly sized cities, and at the same time; two more diverse skyscrapers are unimaginable, yet it happened. And it happened despite style, despite budget, despite politics; it happened because of that one thin thread that connects both, that interminable quest for height. Architectural pluralism was fashionable, and it provided for lively discourse on big city skylines and for angry treatises penned about the latest architectural aberrations. An architect could choose to build in any style, and in this malaise was created the Philadelphia City Hall – a sublime monument for the people, a revered landmark for some, and a "temple of local politics" for its sponsors.

As early as 1842 Philadelphia officials sought to erect a new City Hall and noted architect Thomas U. Walter was instructed to prepare a plan. He did, but nothing transpired. Time passed and again talk of a new building surfaced in the late 1860's. After much political wrangling, and the sponsoring of an architectural competition, a very accomplished architect was selected - a Philadelphian named McArthur. Equally renown was Thomas Ustick Walter (1804-1887)¹⁴⁰, who served as consulting architect and designed much of the Philadelphia City Hall's detailing.

Construction commenced on the giant Philadelphia City Hall in 1871 with a cornerstone-laying ceremony taking place on July 4th, 1874. A topping-out ceremony occurred in 1894 and the Philadelphia City Hall was officially opened to the public on November 30th of that year. Though not totally complete, work would continue for another seven years on mainly decorative statuary and miscellaneous artwork, the skyscraper stood. The new building, designed in the French Second Empire style, was an architectural triumph. When completed this was one of the world's *largest* buildings, but its *tour de force* – its tower – earned for it the title of America's *tallest* building, the world's *tallest* municipal, tallest office, and tallest masonry-supported building too. Architect John J. McArthur, Jr. dedicated twenty-one years of professional life to this one commission which earned him both kudos and criticisms. His passing in 1890 robbed him of witnessing the completion of his greatest project. Ultimately, *his* building became the pride and symbol of America's then-second largest city and is still admired by most – and scoffed at by some.

The City Hall occupies an entire block in the middle of downtown Philadelphia. In plan it is rectangular with a large interior and open courtyard centered inside. Exterior walls are of gray granite and are embellished with columns, pedimented windows, and a variety of sculptural flourishes including allegorical figures and animal images.¹⁴¹ The entire structure is ringed by massive mansard roofs, pavilions, and plastic walls that advance and retreat, all of which are characteristics of the French Second Empire style.

The interior of the Philadelphia City Hall is a Renaissance potpourri, a riot of colors and shapes. Walls are adorned with sculptures, friezes, mosaics, frescos, and much gilding. Some walls are of walnut and mahogany paneling, others are laid up with white marble or salmon-colored granite. Ceilings still anchor alabaster chandeliers while marble columns stand sentinel along polished granite hallways. Each of the City Hall's four corners

house a six-story-high open staircase, were an architectural treat of the first order.

This is indeed a skyscraper to be reckoned with, not only because of its height and size, but also because of the services it has provided to the citizens of Philadelphia - for over a century. Its first seven floors, serviced by four banks of passenger elevators (installed during construction - *not later on*), house the office of the mayor, various reception rooms, courtrooms, city council chambers, a law library, offices of elected city representatives, and the offices of hundreds of city employees.¹⁴²

The Philadelphia City Hall's imposing, ninety-foot-square tower rises off-center and adjacent to the structure's main pavilion. The tower is of brick and stone construction up to the level just below the clock and belfry, 381 feet above the sidewalk. Above that point, the tower is framed with a skeleton of steel and is wrapped with a jacket of cast iron plates; these were painted to match the gray of the granite walls far below. Bronze statues, anchoring the tower's upper four corners stand twenty-four-feet and weigh ten tons each. The bronze statue atop the tower is in the likeness of William Penn and it measures thirty-seven-feet tall and weighs-in at over twenty-six tons. Topping-out ceremonies in 1894 commenced only when this statue's fourteen sections were completely raised into place by wooden derricks, fused together, and permanently fixed to its podium. Only then did the City Hall's upward thrust cease - 548 feet into the sky, securing for itself a place in the history of the skyscraper. And, as with dozens of skyscrapers yet to come, city fathers approved of a plan to open the tower to the curious. Visitors entered an elevator in the City Hall's lobby and ascended to the seventh floor. A change of elevators was required here which lifted guests, only nine at a time, up to a tiny staircase, which, once climbed, placed the adventurous on the outside observation deck. The viewing platform encircled the statue's base affording unobstructed viewing in every direction. It was lighted for night viewing, and best of all it was free. It must have been simply exhilarating to gaze down on other skyscrapers, when just moments before, they towered overhead. What a glorious building this must have been, how very tall it must have appeared to those of the 1890's. What a gift they have left behind.

Later-day architectural critics have found it necessary to criticize the Philadelphia City Hall on many counts, some of which include its European leanings, usage of antique forms, its garish demeanor, strange proportions, and its overall abandonment of modernism as defined by the last decade of the nineteenth century. It is guilty as charged. Still, harsh criticisms surfacing after three generations often loose their validity and potency. Architectural historian and photographer G.E. Kidder Smith referred to this skyscraper as a "glorious mastodon."¹⁴³ The sometimes cantankerous Lewis Mumford, architectural critic, historian, and author, described this City Hall in 1956 as "an architectural nightmare, a mishmash of uglified Renaissance styles welded into a structure rugged enough to resist an atomic bomb..."¹⁴⁴ Good, it was well made.

Buildings age, times change, and the culture and technology of an era must be taken into account when criticizing, and because of that, we make, or should make, exceptions. The Philadelphia City Hall teaches us much, it teaches us that the act of building tall is its own reward, but perhaps most, it teaches us that this building is a *precious* thing from a former age and that it should be cherished for what it was and for what it might come to mean to our children.

Interesting facts about the Philadelphia City Hall:

- Philadelphia City Hall stands nine floors, 548 feet tall, including its statue
- building's base dimensions are 470 by 486 feet, that is 228,420 square feet or 5 $\frac{1}{4}$ acres
- building contains 630,000 square feet of floor space throughout
- number of individual rooms: 695
- employees and guests are served by twenty elevators
- total building cost: \$26 million
- length of public corridors is three miles
- building has fourteen entrances
- tower walls, at its base, are twenty-two feet thick with single blocks weighing two to five tons each
- granite covering on just exterior walls equals one-million square feet
- the City Hall reigned as Philadelphia's tallest building until 1987 (a 93-year-old record!) when One Liberty Place, designed by Helmut Jahn of Chicago, was completed. The new "tallest" officially stood at sixty-two floors, 960 feet tall, topping the City Hall by a healthy 412 feet.

Old Colony Building

Chicago

Holabird & Roche, Chicago

1894

The Old Colony Building is a tightly composed modern building of the first order. This is one of a remaining few nineteenth-century Chicago skyscrapers that broke rank from their eastern counterparts and forged headlong into the new aesthetic of moderation, handsome proportions, and most of all a sizable dollop of personality.

Francis Bartlett, a Boston businessman, sponsored the erection of this speculative office tower in the South Loop. The building's name, Old Colony, harkens to the builder's home state and is the traditional moniker of Massachusetts. Bartlett paid \$900,000 to build the structure that originally housed six passenger elevators, five retail stores, and 600 offices.



(113) Old Colony Building. Photo by author.

Conceptually the Old Colony is an up-ended rectangular box with rounded corners; those unique and intriguing corners are its tour-de-force. The building measures 148 feet north to south, sixty-eight feet east to west, and stands seventeen floors – 203 feet tall. A metal skeleton supports the skyscraper and it is composed of wrought iron Phoenix columns with beams and girders of steel. The first four floors are faced with blue Bedford stone while upper walls are of tan pressed brick and terra-cotta.

Broad Street Station

Philadelphia

Wilson Brothers & Company, Philadelphia

1882

Furness, Evans & Company, Philadelphia

1894



(114) Broad Street Station

The Broad Street Station in central Philadelphia was primarily a great metropolitan rail station, and only secondarily a skyscraper office building. These two diverse concerns were melded into this urban complex in 1894 after the completion of the office tower. Philadelphia's landmark complex was knitted into the very fabric of downtown, and offered access to rail transportation, rental office space, commercial and retail businesses. The development, built and owned by the Pennsylvania Railroad, was billed as the world's largest passenger terminal. City fathers touted its more than 300-foot long train shed, complete with a steel and glass roof, to be the "greatest permanent span yet achieved."

The Victorian Gothic skyscraper, costing \$1.5 million, harmonized with the existing railway station's style and its materials of red brick, red granite, and red terra-cotta. It rose thirteen stories, 268 feet high, and it made visible the location of the great train station for miles in all directions. Its flamboyant corner tower sported: arched windows, finials, and elaborate detailing. This building possessed a skeleton of steel and iron and it was indeed a revenue producer for its owner.

The Broad Street Station stood as one of the first, if not *the* first, example of where the connecting of two skyscrapers occurred via a glass enclosed pedestrian bridge. Spanning over busy Market Street at the second floor level, this bridge connected from the Station to the twenty-one-story Arcade Building, sometimes referred to as the Commercial Trust Building.¹⁴⁵

In 1923, a fire destroyed the 1882-constructed train shed that was adjacent to the head-house. It was never rebuilt. Thirty years later, the train station and its romantic skyscraper were demolished.

Postal Telegraph-Cable Building

New York City

Harding & Gooch, New York City
1894

1

The Postal Telegraph-Cable Company was founded in 1883 and within a decade it commissioned the construction of this skyscraper. Upon completion, the Company itself occupied the top three floors of this building. This office building rises thirteen floors, 193 feet tall. It measures fifty feet along Broadway and 100 feet along adjacent Murray Street.



(115) Postal Telegraph Building



(116) Like the Western Union before it, the Postal Telegraph Company erected a skyscraper based upon the sales of millions of such pieces of paper.

This tripartite skyscraper was designed in a decided Renaissance manner. Ionic pilasters, oval-shaped windows, and a bronze and copper cornice are prominent features of this building. A three-story-tall recessed bay marks the building's main entrance. Because of broad belt courses that mark every floor of the building's mid-section, the whole of the structure reads as a great layered box; its tier upon tier render the horizontal more emphatic than the vertical.

Due to expansion needs, the Postal Telegraph-Cable Building was purchased in 1947 by the neighboring Home Life Insurance Company. Consequently, the floors of the two structures were connected, but despite this, each is still seen as a distinct architectural composition.

American Surety Building

New York City

Bruce Price, New York City

1894



(117) The American Surety Building and Trinity Church, its steeple once ranked it the tallest structure on Manhattan Island. The twenty-story Gillender Building (Berg & Clark, 1897) is to the right.

The American Surety Company of New York, a diversified financial firm, was established in 1881. By 1895, the company employed some 1,200 agents, and by 1898 American Surety boasted forty branches and 15,000 agents throughout North America. Rapid growth required more office space and that translated into a tall building. The source of all management and direction was from the home office, and that home office was once located in the great and proud skyscraper at One-Hundred Broadway.

An architectural competition was sponsored by the American Surety Company for the design of its planned building. Respondents included some of the country's most noted architects: Napoleon Le Brun & Sons, George B. Post, Carrere & Hastings, McKim, Mead & White, and Bruce Price among others. This was a stellar field indeed, but it was Bruce Price who prevailed.

Price called for a twenty-one story building that was to rise 312 feet above the street, have base dimensions roughly eighty-five feet square, and rise without setbacks. The American Surety Building stands as conceived, employing six passenger elevators and a complete steel skeleton supported by caissons sunk seventy-two feet to bedrock. Its facings stone is white-gray granite from Maine.

Architecturally the building is a fine example of the neoclassical style; it has symmetrical facades, tripartite organization, prominent cornice, and a street-level ionic colonnade with a richly detailed entablature. In addition, the fourteenth floor of the Broadway facade is graced by four high relief angelic figures, complete with flowing gowns, precariously poised beside two windows. But, this skyscraper's piece de resistance is the sculptural group above the Broadway entrance. Here, thirty-six feet above the sidewalk, stand eight elegantly dressed Greek-like marble figures. This allegorical group was sculpted by Scottish-born artist John Massey Rhind (1858-1936), a graduate of the Scotch Academy and the Royal Academy in London. This is certainly among his finest work.

When completed, the site of the American Surety Building was valued at \$267.67 per square foot, or the equivalent rate of over \$11.5 million an acre. Tenants were enticed to rent in the new building because it boasted an unobstructed view across Broadway - an unrivaled panorama of Trinity Church and its graveyard. Today, although renamed the Bank of Tokyo Building, the view remains as a timeless vestige of old New York.

*Whether it be the sweeping eagle in his flight or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, form ever follows function, and this is the law. Where function does not change form does not change.*¹⁴⁶

Chicago Stock Exchange Building

Chicago

Adler & Sullivan, Chicago

1894

To many observers this was the grande dame of Chicago architecture, the masterpiece of Adler & Sullivan's partnership, and quite simply the most beautiful skyscraper erected to date - anywhere. It was here, with the Chicago Stock Exchange Building, that the "true skyscraper" came of age, and it was here where the high point of modern architecture in Chicago was realized. With this skyscraper, the building's façades revealed the *internal change of function* by the alteration of the appearance of the building's curtain wall;

where the interior function changed the building's exteriors reflected that change. Through variations of color, materials, proportions, fenestration or other architectural contrivances, the building's functional change could be "read" externally. Thus, this skyscraper's façade became a *container that disclosed an internal change* – not necessarily identifying the function – but noting that some change had indeed occurred, some inner logic was important enough to "announce" on the exterior. Louis Sullivan said as much, and here, practiced what he preached.



(118) Chicago Stock Exchange Building

As a home to the Chicago Stock Exchange, the building housed the Trading Room, a delicious space measuring sixty-four by eighty-one feet, and rising thirty feet high. It was brilliantly lighted and profusely decorated by stenciled patterns. The walls and ceilings were multi-colored with gold, red, and green predominating. The double-height Trading Room was on the second floor as revealed by the arcades on the LaSalle and Washington Street facades.¹⁴⁷ This skyscraper also rented out 480 offices, mostly to tenants involved with the Exchange in some manner. These offices were located on floors four through twelve as evidenced externally by the structure's oriel windows. The thirteenth floor, marked by stout columns and a recessed window wall, marked the location of the attic. The Chicago Stock Exchange Building's first floor was given over to retail shops,

stores identified by large light-emitting windows, the types perfect for browsing shoppers. In each case, wherever an interior function changed the facades bore that change out.



(119) Delicate detailing of the Chicago Stock Exchange's entrance arch. Photo by author.



(120) Intricate patterns are revealed in stone, a testament to Sullivan's mastery of form. Photo by author.

The Chicago Stock Exchange Building was not only a modern landmark of design, it also served as the home to a major financial institution, an important player in the economic health of Chicago. Its major tenant and *raison d'être* was of course the Chicago Stock Exchange, a marketplace for stock trading founded on January 19th, 1865. For the next twenty-nine years the Exchange occupied space in a host of significant downtown structures such as the Board of Trade Building, the Chamber of Commerce, and the Chicago Opera House Building.¹⁴⁸ By the early 1890's expansion into its own structure became more than desirable.

During the early months of 1893 the firm of Adler & Sullivan completed the drawings for a building slated to be the new home for the Chicago Stock Exchange. It would rise on the southwest corner of LaSalle and Washington Streets and be a splendid new "palace" on Chicago's financial corridor already lined with "money palaces."¹⁴⁹ Construction commenced in July, 1893, and on May 1st, 1894 the building was officially opened.¹⁵⁰

The cost of the Chicago Stock Exchange Building, borne by its builder and real estate investor Ferdinand Peck, amounted to \$1,131,555.¹⁵¹ For this substantial sum Peck got a skyscraper, and Chicago got a landmark. Chicago's newest skyscraper rose thirteen stories, 173 feet above the sidewalk. It stood across LaSalle Street from the Chamber of Commerce and the Tacoma Buildings, and was two-to-three blocks from the Home Insurance, Woman's Temple, Rand-McNally, Insurance Exchange, Ashland Block, Schiller, the Rookery, and others. The Chicago Stock Exchange Building rose in a forest of great

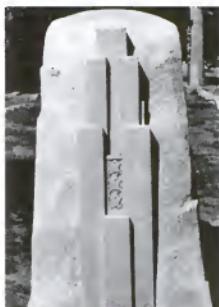
buildings, an extant "classroom" of American commercial architecture that has not since been equaled in importance. Its neighbor to the south, though not considered architecturally important by some, provided significant contrast to its taller neighbor. Separated only by tiny Calhoun Place, the five story LaSalle Building was a vigorous example of the French Second Empire style executed wholly in stone.¹⁵² Constructed in 1872, the LaSalle's contrast with the Stock Exchange was pronounced; in only one generation the office building, as a distinct genre, evolved from the weighty and stout French style into the tall, glassy, "Chicago-type."

The Chicago Stock Exchange Building measured 180 feet along LaSalle Street and 100 feet east-to-west along Washington Street. It was L-shaped above the third floor (the L opened to the southwest), was faced with limestone, buff brick and terra-cotta, and was topped with a prominent cornice. This skyscraper stood by means of a complete steel frame, which was supported by pneumatic caissons – these, the first to be used in Chicago.

To enter the building's main entrance, that on LaSalle Street, one had to pass through one of eight embellished doors, portals that were beneath a monumental entrance arch – a carved stone masterwork. Upon negotiating a large foyer one was enveloped by a splendid lobby. Tenants and visitors were transported to their floors by ten passenger elevators.



(121) Louis Henri Sullivan (1856-1924). Sullivan was the preeminent skyscraper designer due to his profound and unbridled contributions to the art form. Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 878.



(122) The granite headstone of Louis Sullivan, the *Father of the Skyscraper*, rests in Chicago's Graceland Cemetery. It was designed in 1929 (five years after Sullivan's passing) by architect Thomas Tallmadge. Each of the marker's two ends (sides) displays a skyscraper form emerging from the stone. Photo by author.

(123) The side of Sullivan's headstone displays no finer image. Photo by author.

The reverse of Louis Sullivan's marker reads:

1856 Louis Henri Sullivan 1924

By his buildings great in influence and power;
his drawings unsurpassed in originality and beauty;
his writings rich in poetry and prophesy;
his teachings persuasive and eloquent;
his philosophy where, in "Form Follows Function,"
he summed up all truth in art,
Sullivan has earned his place as one of the greatest
Architectural forces in America.
In testimony of this,
his professional and other friends
have built this monument.

On April 20th, 1908, the Chicago Stock Exchange abandoned their namesake building and relocated to rented space in the Rookery Building, three blocks south. After only fourteen years, a relatively short period of time, the Exchange left to return no more. Left behind was a structure of substantial importance, a business home tailored to *their* business, an exquisite work of art.

In 1972, the Chicago Stock Exchange Building was savagely removed from us...all of us.

Champlain Building

Chicago

Holabird & Roche, Chicago

1894

The Champlain Building was a fifteen-story office skyscraper of superb architectural clarity, a gridded box of rectangles where neither vertical nor horizontal line dominated. Trim and fit, the Champlain was a 189-foot-tall tower without nuances and foolish contrivances. Within its clearly delineated base, shaft, and capital disposition the Champlain avoided projecting bays of any type – whether rounded, square, or otherwise – but instead, devoted itself to two straight and simple street walls. With the Champlain there was no monumental entry portal a la Rockery, Chicago Stock Exchange, Ashland Block or others of its generation, but instead, the Champlain's artistic success relied more upon what it lacked architecturally than what it possessed; it was a *modern* masterpiece. This skyscraper's terra-cotta-coated steel frame, unbroken piers, subdued cornice, and use of Chicago windows rooted this structure squarely in the Chicago school tradition. The Champlain stood on the northwest corner of State and Madison Streets until 1916 when it was shamefully demolished, wrecked a scant twenty-two years after its completion.

(124) Champlain Building, a truly *American* composition.





(125) Manhattan Life Insurance Building, for a short time the World's Tallest skyscraper.

Manhattan Life Insurance Building

New York City

Kimball & Thompson, New York City

1894

The Manhattan Life Insurance Company began business on August 1, 1850 in a building located at One-Hundred-Eight Broadway in lower Manhattan. Like hundreds of companies nationwide, and within a relatively short time, this insurance company will come to erect an office skyscraper as its home.

The Manhattan Life Insurance Building was one of the most important skyscrapers of the 19th century. It was a trailblazer, the first skyscraper to charge higher rents for higher floors and the first to employ caisson piers of concrete in its foundation. Perhaps most important of all, it wrested away from the Pulitzer Building (George B. Post, 1890) the title of The World's Tallest Building - an honor held for only seven months by the Manhattan Life.

In 1892, architects Francis Henry Kimball and George Kramer Thompson formed a partnership, entered a competition to design the Manhattan Life Insurance Building, and proceeded to win that competition. The firm of Kimball & Thompson ultimately came to take space in the new building.

Plans for the new skyscraper were filed with the New York Building Department on February 2nd, 1893, at which time, the *New York Times* claimed that the new tower will be "one of the handsomest buildings ever put up in this city." The Secretary of the Manhattan Life Insurance Company said "the company proposed to put up a fine building and no money would be spared to make it complete in every particular. It will be [he said] an ornament to the city." This headquarters building would come to cost \$1 million.

The *New York Times* further trumpeted the new skyscraper in the October 8th, 1893, edition with the following headlines:

The Tallest In The World
A Giant Among The Office Buildings Of New-York

Eighteen Stories for the Fine New Structure of the Manhattan Life Insurance Company
Many Difficult Problems Met and Overcome
A Framework of Steel Buried in Brick
A Caisson Sunk to Solid Rock to Make the Foundation
Latest Novelties and Conveniences

The Manhattan Life was a startling addition to the New York skyline - even during construction when its complete steel frame reared "menacingly" over Broadway. It grew out of the murky hole where caissons were sunk to improbable depths. Then, within weeks, its skeleton reached street level on its way to the sky.

Official opening of the Manhattan Life's new headquarters occurred on May 1, 1894. The other contender in the race for the *World's Tallest* title was the Philadelphia City Hall. That building officially opened to the public on November 30, 1894, so for seven months the title "officially" belonged to the Manhattan Life Insurance Building. The year 1894 ended recording the Philadelphia City Hall tallest and the Manhattan Life second.

Nonetheless, New York's new giant Manhattan Life stood nineteen stories, 348 feet tall. The main block of the building rose sixteen floors, 246 feet; the tower above contained three more floors and added an additional 102 feet to the building. In plan the building was rectangular measuring sixty-seven feet wide by 125 feet deep. The skyscraper's main entrance was at Sixty-Six Broadway, a prestigious and coveted location indeed. A secondary entrance was at Seventeen New Street serving the building's east side.

The Broadway facade was quite detailed and offered an arched entrance where the words "The Manhattan Life Building" were in raised letters. The building's interior featured grand halls and lobbies richly dressed with Vienna marble. The insurance company occupied floors six and seven and these housed agents, consulting physicians, stenographers, and directors of the firm. The powerful Knickerbocker Trust Company, one of the building's first tenants, rented office space above. Large shafts and ducts directly ventilated every office in the building. An upward current was maintained by electric fans which also carried out hot and stale air to vents on the building's roof. Seven passenger

elevators moved guests and office personnel from the lobby to the hundreds of offices above. Five of those elevators were hydraulically operated and the other two were electric powered cabs furnished by the Otis Elevator Company.

From Brooklyn, New Jersey, and the New York Bay the great skyscraper could be seen. Its creamy-white Indiana limestone glowed over Lower Manhattan, an American flag flew from its top. The building was a solid rectangle until the eighth floor where the building's plan changed to form a U with the opening to the south. The resultant light well assured all tenants fresh air, natural light, and of course unrivaled views. A three-arched outside passageway connected the two wings of the building at its fifteenth floor. The south facade even featured a discordant detail in the form of shuttered windows. Facades other than the Broadway were of common brick and terra-cotta.

Perhaps the most compelling aspect of the Manhattan Life Insurance Building was its Baroque-styled tower. Rising above what might otherwise be considered commonplace facades is a place, a form, an architectural expression intended to terminate the upward thrust of this early skyscraper. Situated between two shallow domes positioned at the corners of the building's main block, was the tapering tower. The square-plan portion contained two floors, the seventeenth and eighteenth, while the eight-sided portion housed one floor, the nineteenth. It was here, in these three rooms stacked one above the other, that once housed New York's official weather bureau (it left the nearby Equitable Building to relocate here). The seventeenth floor was used by forecasting assistants for general observations and office work, while the eighteenth was filled with weather instruments. The nineteenth floor, under the dome, was the private office of the forecaster. Here, on the building's topmost floor, the level was 384 feet above tidewater. At that time only two signal bureaus were situated at a greater altitude - those on Mount Washington and on Pike's Peak. Signal lights were used at night: Red lights warned mariners of northeast gales, and nightly powerful searchlights marked the skyscraper's location to those many miles out to sea.

In 1904, the Company completed an addition. Instead of piling more floors atop those existing, as happened with the New York Tribune Building, among others, the Manhattan Life structure grew laterally. To the north, along Broadway, two bays were added with of course the requisite floors above and a redesigned tower. The changes did not blend well with the original building, and the new proportions contributed only to the detriment of the building.

In 1936, the Manhattan Life Insurance Company relocated its offices to One-Hundred-Twenty West 57th Street in midtown Manhattan. Then, catastrophe arrived when the building was only 69 years old; in a 1963 act of utter desecration, the Manhattan Life Insurance Building was demolished.¹⁵³

John Root died in 1891; Daniel Burnham, his partner, swung over into the classical school and took his cues from New York. But in 1894 one more building in the spirit of his dead partner emerged from Burnham's office, the Reliance Building on State Street – the "swan song" of the Chicago school. Speaking in a broader sense, it might perhaps be said to have grown out of the Chicago soil itself, to be a reflection of the high architectural level that has been reached in that city.¹⁵⁴

Atwood has never wholeheartedly been credited for his work on the Reliance Building, which rises to such heroic heights¹⁵⁵

Reliance Building

Chicago

D.H. Burnham & Company, Chicago
1895

reliance /riliens/ n. trust; confidence. reliant adj. (reliance in or on) trust in, faith in, dependence on.

The Reliance Building materialized from the "ruins" of an earlier office building. From a rather nondescript and smallish office block emerged an avant-garde architectural object without compare. It was called the *Reliance*, a name pregnant with virtues young and brash architects seized upon hoping design of this caliber might be repeated – by them. It exuded *trust, confidence, faith*, and it was an icon of *dependence* in the sense that upon it hinged the promise that a new and more compelling *modern* architecture might prevail in general, and a fresh approach to skyscraper design might arise in particular. The Reliance's task was formidable but it succeeded, it triumphed in an artistic arena where mean-spirited aesthetic battles waged and demolition was too often a nearby specter. For its time this was one of the most distinctive and prophetic skyscrapers anywhere.

The respected architectural scholar, Carl W. Condit, aptly described the significance of the Reliance Building when he wrote:

The Reliance is not, like the Crystal Palace, a passing sensation produced for an exposition. It is a utilitarian structure commissioned as an office building, and it has been actively used as such since its completion. Yet if any work of structural art in the nineteenth century anticipated the future, it is this one. The building is the triumph of the structuralist and functionalist approach of the Chicago school. In its grace and airiness, in the purity and exactitude of its proportions and details, in the brilliant perfection of its transparent elevations, it stands today as an exciting exhibition of the potential kinesthetic expressiveness of the structural art.¹⁵⁶

The Reliance Building's "grace" and "airiness" would today be impossible to appreciate except for a series of fateful events spurred on by Chicago industrialist, William Ellery Hale (1836-1898), owner of the Hale Elevator Company which manufactured hydraulic passenger elevators for many of Chicago's early skyscrapers, purchased a four story office block in 1882. His investment, located on the southwest corner of State and Washington streets, was an early product of the firm of Burnham & Root and its styling was of the Italian Renaissance. First floor walls featured large glass planes separated only by the thinnest of mullions, the remainder was faced with granite. This building, dark and

brooding, would become the springboard for the Reliance.

As early as 1889 Hale began planning for a tall office building on the site he purchased seven years earlier. After overcoming substantial lease and legal issues with existing tenants, consultation with his architects, Burnham & Root, proceeded. John Wellborn Root, principal of the firm, would be in charge. The Chicago press released information about Hale's project for a sixteen story (later reduced) skyscraper and the details involved. Plans called for the demolition of the existing office block's top three floors and leaving the first floor as a "base" object. New foundations would be constructed within and beneath the remaining first floor to support the additional floors. As of then, there were no images of the tower. Then, in relatively short order, a series of fateful events occurred. On January 15, 1891, architect John Root died. The vacuum was immediately felt at the firm and was reflected on its banner: Burnham & Root became D.H. Burnham & Company – officially the architect of record for the Reliance Building.



(126) Reliance Building Photo by author.



(127) Charles B. Atwood (1847-1909). Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 875.

A young architect, Charles Bowler Atwood (1848-1895), was hired by Burnham & Root on April 21, 1891. He was born in Millbury, Massachusetts and studied architecture at Lawrence Scientific School at Harvard University. For a while Atwood was employed as a draftsman in the Boston office of Ware & Van Brunt, and in 1872, he established his own practice in the same city. While in the employ of Burnham, Atwood was credited with designing, or contributing to the designs of, some of the buildings constructed for Chicago's Columbian World's Exposition of 1893. His other achievement of note was Buffalo's ten-story Ellicott Square Building, completed posthumously. Daniel Burnham selected Charles B. Atwood as Root's replacement to continue the office building project for client William Ellery Hale. It would have been impossible for Atwood to know, but no other single project would bring Atwood the recognition achieved by this one commission.

Atwood set about designing, and redesigning, the upper floors of the much anticipated skyscraper, now finally named the Reliance Building.¹⁵⁷ New elevations revealed glass, lots of glass. And what was not glass would glisten in the sun: glazed terra-cotta. Whatever was dreamt of by Root was discarded. Atwood conceived of a transparent box, an ethereal pillar whose existence, by some, was impossible to fathom; only a building faced with a quarry of stone and ringed by Roman columns constituted the architecture of a proper business structure. Atwood disagreed.

The top three floors of the old four story building were removed in mid-1894. Foundation work, consisting of bedrock concrete caissons reaching as deep as 125 feet below the street, was completed at about the same time. Incredibly, with tenants still occupying the first floor, steel construction commenced. A full steel frame, consisting of factory-assembled two-story columns, was rapidly erected; significantly no piers or columns resided within the building's exterior envelope, they were recessed inward from the exterior building walls. Considerable steel-trussed wind bracing was required due to the relatively small dimensions of the building: fifty-six feet north-to-south by eighty-five feet east-to-west. The Reliance's riveted steel frame was completed in only fifteen days, those being July 16 through August 1, 1895. Hundreds of large panes of plate glass and tons of cream-colored terra-cotta, provided by the celebrated Northwestern Terra Cotta Company, formed the building's envelope. A rich mix of materials such as polished Scottish granite, bronze, and hardwoods embellished the first floor exterior walls. In the public lobby, entered from State Street, one accessed the skyscraper's four passenger elevators. After an astonishingly swift construction schedule the Reliance Building was opened to the public with great fanfare on March 15, 1895. Officially, Chicago's newest skyscraper sensation stood fourteen stories (original first floor plus thirteen new floors on top), an even 200 feet tall.¹⁵⁸

For the most part the architectural press reacted favorably. To some the Reliance Building was seen as a trailblazer, a maverick in a maverick town. But most were captivated by the little skyscraper's banded Chicago windows, its horizontal emphasis, flat idiosyncratic roof, its lack of overt historicist styling, and perhaps most of all, by its almost minimalist bravura.¹⁵⁹ The absence of stone, and terra-cotta that mimicked the appearance of stone, was a fresh response on the part of the designer and was accepted as an altogether proper response for a modern building – in Chicago. Upon the building's completion *The Architectural Record* argued:

Should enameled terra cotta prove to be what is claimed for it, if it stands the test of Chicago's severe winters and changeable climate, there can be no possible doubt but what as a material for exterior construction it will be largely used in such cities as are afflicted with a smoky, sooty atmosphere. The idea of being able to wash your building and have it as fresh and clean as the day it was put up, must undoubtedly attract people to the use of the material.

Continuing,

...why should architects and the public complain of the monotony of the dull grays, browns and reds of the present material used in building...However, the first step is the important one, the boldness of the architect who took the first step is to be commended.¹⁶⁰

Atwood deserved to be commended. The Reliance was special, and the architect's approach to problem solving was unique. But all too often good chemistry is fleeting. The visionary, Atwood, would be dismissed from the Burnham firm on December 10, 1895. He would die a little more than a week later on December 19, 1895. The investor, Hale, would die three years after the completion of the Reliance, his last speculative venture downtown.

From the ruins of a tired set of architectural conventions emerged Chicago's Reliance Building. Traditional ideas were shunned in favor of something entirely new, glassy, lightweight, a treat for the eyes of the public. Atwood chose, and Hale approved, a new set of aesthetic standards that would come to captivate the twentieth century and allow for only one conclusion, that much of what modernism is today began in 1895 with the Reliance in that maverick town.

Milwaukee City Hall

Milwaukee

H.C. Koch and Company, Milwaukee

1895

This civic monument is generally considered Milwaukee's most significant building, skyscraper or otherwise. Upon its completion the Milwaukee City Hall, standing nine floors, 350 feet, was the second tallest building in America and was topped only by the 548-foot-tall Philadelphia City Hall, completed one year earlier. The Milwaukee City Hall was the city's biggest and most expensive office building for more than seven decades it reigned as Milwaukee's tallest building.¹⁶¹

Toward the end of the nineteenth century Milwaukee politicians and business leaders lobbied for a new city hall. Issues regarding location, image, architectural style, and of course cost were bandied about as early as 1882. A nation-wide design competition was sponsored by the city which produced eleven contestants. Each architect's design was judged and all were eliminated but two, those by Chicago's prolific Henry Ives Cobb and Henry C. Koch (pronounced "cook") of Milwaukee would remain for closer scrutiny. Accusations of probable cost overruns were charged by both parties, and each architect suffered the slings and arrows heaped by the other regarding designs were termed objectionable and deficient. After much clamor, Milwaukeean Henry C. Koch was awarded prize money totaling \$800 and the contract for the city's new municipal skyscraper. Henry Ives Cobb returned to Chicago, his ego probably bruised, with the second place award of \$500.

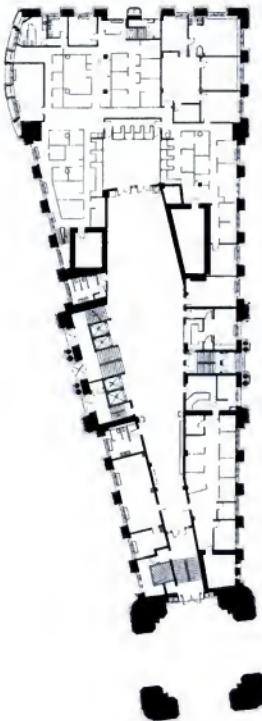
Henry C. Koch (1840-1910) was the man chosen, the Milwaukeean, the architect who translated a city's wishes into a viable piece of architecture and an endearing symbol of the city. He was German-born and was brought to Milwaukee as an immigrant boy where remained until his death. He studied architecture, beginning in 1856, under Milwaukee architect G.W. Mygatt, and later served in the Civil War. During his professional career Koch designed more than 300 buildings – almost all in Wisconsin. The Milwaukee City Hall was his masterpiece, it was his biggest commission, and it was certainly his tallest.

On paper the building was spectacular. There was nothing comparable in any American city. Here were his plans for a block-long, wedge-shaped building with an immense glass skylight covering a central light court. At its base the building's dimensions are 105 feet

on its north, 330 and 316 feet on its east and west sides respectively, and a stingy - but all the more dynamic - fifty-six feet on its south front. The new nine-story building would stand by means of a steel skeleton and it would be outfitted with four passenger elevators. Offices, meeting chambers, and public rooms would open onto corridors that were planned to ring the nine-story light court. On the tenth floor, tucked into an attic space, was to be located an apartment(s) for custodians or watchmen and their families. Koch selected the architecture and spirit of the Flemish Renaissance, especially Dutch and Belgian guildhalls, to best represent the ideals of the people and government of Milwaukee. Few had seen anything quite like it.



(128) The Milwaukee City Hall, completed in 1895, was once America's second tallest skyscraper. Wisconsin Historical Society, image I.D. 5469.



(129) The Milwaukee City Hall's first floor plan reveals its idiosyncratic form and nine-story coffin-shaped atrium. The building's south-facing main entrance is centered upon a one-time *porte cochre*, a space marked by four solid blocks of masonry. These giant "legs" define this transitory space which begins a formal, and spatially intriguing, entry sequence into the atrium. Above, a heavy tower presses earthward, not to a massive supporting base, but to a "room" of empty space. Here, space is simultaneously, and contradictorily, static and dynamic.

The drawings further revealed the building's exclamation point. As planned, its massive, foursquare tower would contain offices on its lower floors, serve as a bell and clock tower in its mid-section, and at the top would be one of the most wonderful terminations to a building – a whimsical, ceremonial spire complete with an observatory. How perfect for the period, how appropriate to the gilded age, a meaningless extravagance without which this building might be considered common, but with it, the City Hall becomes legendary.



(130) The architect and his mason are stating in stone that the Milwaukee City Hall will stand for the ages, for the delight of the children and for their children. Photo by author.

In June 1893, the first of some 2,500 yellow pine piles was driven fifty feet into the reclaimed marshland that would support the City Hall. Fifteen-foot-deep limestone footings were positioned atop bundled pilings providing a super-strong anchorage for the steel skeleton soon to rise on top. The cornerstone was laid on February 24th, 1894, and on December 23rd, 1895 the building's opening ceremony was held. Auditors announced that Milwaukee's new City Hall cost just \$945,311, a very reasonable sum indeed, especially for such a large and heaven-ward structure.

There it stood, on that cold day at the end of 1895, officially this country's second tallest building, a nine-story skyscraper that stands 350 feet above the city sidewalk, 393 feet with its flag pole. It was constructed as drawn and it was impressive.

The height of the main office building, that is to the top of its slate roof, measures one-hundred feet. Twelve dormers ring the roof, and on its north side is mounted a fifty-foot-tall cupola wrapped with copper and surmounted by an elongated finial. The City Hall's exterior is faced with orange brick, gray granite and tan terra-cotta. Displayed on its exterior are carved limestone wolf heads, winged dragons, eagles, and carvings of more than one-hundred infants and cherubs. Arched openings 230 feet high mark its belfry

which houses an 11 ½ ton bell containing a 500-pound clapper. Featured on the tower are copper-domed turrets that resemble cone-topped beer steins and four giant clocks set into an elaborate grid of brick, terra-cotta, and stone.

Atop the masonry pile is the building's finale, its soaring, mostly hollow, and always green, spire. Hundreds of copper plates were riveted together over an iron framework to create this signature "cap" atop the tower; This construction method was similar to that used in the construction of the Statue of Liberty, completed just nine years earlier. A winding staircase of 267 steps rises through the spire to an observatory, marked by a balustrade and columns. A bullet-shaped cupola, supporting a forty-foot flagpole with a three-foot-diameter ball, culminates the upward thrust.

What Henry C. Koch gave to Milwaukee was an extravaganza, a memorable monument imbued with long-forgotten myths of the Low Countries and of the ideals and values of Victorian Milwaukee, and in a larger sense - the whole of America. This skyscraper speaks much about spirit, *the spirit of building tall*, and of American architecture and its role in an often provincially-portrayed city; At its completion, and for a brief moment, the Milwaukee City Hall was taller than anything in New York or Chicago.

Marquette Building

Chicago

Holabird & Roche, Chicago

1895

Father Jacques Marquette (1637-1675) was a French explorer and Roman Catholic missionary who traveled throughout the Mississippi River region especially in what is now Wisconsin and Illinois; he often visited, and at least once wintered in Chicago. Boston investor Peter Brooks and Chicago developer Owen F. Aldis, sponsors of the earlier Monadnock Block, again partnered to erect a new office building for downtown Chicago, and this time it would be called the Marquette Building.¹⁶² The architectural firm of Holabird & Roche prepared the plans for the Marquette during the summer of 1893, and upon its opening two years later, this building was hailed as their finest work.

The Marquette Building stands sixteen stories, 229 feet, and it measures 190 by 115 feet. It rests upon concrete footings and is supported by a skeleton of steel. Originally the building was outfitted with nine passenger elevators. Tan brick and terra-cotta jacket the building. Upon completion, the Marquette Building's cost was calculated at \$1.4 million. As a tribute to the famed explorer the building's main entrance on Dearborn Street is decorated with polished bronze panels above the doors depicting the Father. The two-story lobby, faced with white Carrara marble and wrapped with a balcony, is embellished with mosaics of glass and mother-of-pearl, all further depicting events in the life of Father Marquette. White Carrara marble was generously used throughout the lobby and for its two robust staircases.

The Marquette Building wanted to be a *modern* American office building and it made a gallant attempt: clean lines, unbroken piers, Chicago windows. Yet, it stood with one foot squarely planted in antiquity: this skyscraper originally was adorned with three two-story Ionic columns standing at its main entrance, ample Greek-inspired exterior decoration, and a full-blown neo-Renaissance cornice. Depending upon one's view, the cornice and columns were mercifully, or tragically, removed in a 1950 remodeling.

Chamber of Commerce Building

Detroit

Spier & Rohns, Detroit

1895

In 1895 the twelve-story Chamber of Commerce was the tallest building in Detroit. It, and the nearby Union Trust Building were constructed simultaneously, and each claimed to be Detroit's *first steel skeleton skyscraper*.¹⁶³ A definitive answer is still illusive.

German-born architect William C. Rohns formed a partnership with Frederick H. Spier in 1884. Together they designed the Beaux-Arts Chamber of Commerce Building, a skyscraper that featured a delightful facade of rounded bays, arched and pedimented windows, stone columns and pilasters. Alas, in 1896 the title of "Detroit's Tallest Building" was wrested from the Chamber of Commerce and bestowed upon the Majestic Building.¹⁶⁴

New York Life Building

New York City

McKim, Mead & White, New York City

1896

In 1845, the Nautilus Insurance Company was founded at Forty-Four Wall Street, in lower Manhattan. By 1849, this firm voted to adopt its current name, the New York Life Insurance Company and it has since emerged as one of the largest such firms anywhere.



(131) New York Life Insurance Building



(132) Charles Follen McKim (1847-1909). McKim was a historicist, an architect comfortable with traditional ideas, forms and materials; His three-year stint at Paris' Ecole des Beaux-Arts ensured as much. Harper's New Monthly Magazine, Vol. LXXXV. November, 1892, "The Designers of the Fair" p. 875.

In 1870, architect Griffith Thomas designed for New York Life an Italian-inspired, stone-faced headquarters building at 346 Broadway. Only three months after the completion of this building the company decided to upgrade its already "obsolete" structure. Company officials discovered that they were unable to easily lease out space in their new building's upper floors; an elevator shaft way and a single cab were installed into the four-story building. A mansard roof was also added. Practicality and profitability accounted for the elevator and corporate image accounted for the mansard roof.

Business was such that by 1890 more office space was again required to house the firm's growing staff. Consequently, New York Life swiftly acquired all other parcels on the block bounded by Broadway, Catherine Lane, Leonard, and Lafayette Streets – the block upon which the "1870 building" stood. Now the company could construct its trophy building, but not before a well promoted architectural design competition took place. Participants included such luminaries as Babb, Cook & Willard, D.H. Burnham & Company, Stephan D. Hatch, and George B. Post. Hatch won the competition but died suddenly in 1894.

As a consequence, the company awarded to McKim, Mead & White the task of completing the project. The resulting building was to be a great, extruded Renaissance palazzo. McKim, Mead & White's concept called for incorporating Griffith Thomas' structure into the design of the new building. Conceptually, the old building was wrapped by the new, and then built upon increasing its footprint, and its height.

The New York Life Insurance Building still stands as a remarkable example of a 19th century skyscraper. It rises twelve-stories, 244 feet, and it stretches eastward from Broadway to Lafayette Street encompassing the whole block. The building's base dimensions are sixty feet on Broadway, eighty-two feet on Lafayette, and a whopping 400 feet east-to-west. The structure's main entrance, on Broadway, is graced by an Ionic colonnade above which is a heavy stone balustrade ornamented with various carved finials. Exterior materials include limestone, white marble, and brick. Ten marble eagles, traditional symbols of strength, gaze downward from the building's rooftop balustrades which still serve as their century-old and ominous perches.

It is at the summit where this skyscraper's piece de resistance can be found. A delightful, telescoping clock tower rises above the main mass of the "marble box" and provides an adequate exclamation point for what might otherwise be considered a boring slab. Four clock faces of translucent glass, each 12 feet wide with Roman numerals, rest upon a high relief, marble cornucopia. Each clock face is lighted nightly by means of twenty-eight light bulbs ringing each face's periphery. Ionic columns bracket the timepieces. Atop the clock tower once stood a sculpture group designed and carved by Philip Martiny.

Here, an eagle topped, metal-ribbed globe supported by four Atlantes, reigned supreme; it too was lighted each evening. This romantic work, standing thirty-three feet, was last seen in 1928, about the same time that the New York Life Insurance Company vacated its Broadway home for its 44-story skyscraper on Madison Avenue. Currently, the old New York Life Insurance Building provides office space for various municipal departments of the City of New York, and is simply known as 346 Broadway.

*It must be tall, every inch of it tall. The force and power of altitude must be in it, the glory and pride of exaltation must be in it. It must be every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a single dissenting line.*¹⁶⁵

Guaranty Building

Buffalo

Adler & Sullivan, Chicago

1896

Few buildings anywhere have attained the stature of this nineteenth century skyscraper, the landmark Guaranty Building. Here, with this singular building, architect Louis Sullivan described just what the future of the American skyscraper could be, how this new building type could define America's cities and indeed the country itself. Louis Sullivan's Guaranty Building, often described as his most mature skyscraper, clearly spoke to the future and preached of abandoning the past and the dusty styles of antiquity.

A Buffalo oil magnate named Hascal L. Taylor (1830-1894) purchased a parcel of downtown land on the corner of Pearl and Church streets for investment. That "investment," according to Taylor, was meant to be "the largest and best office building in the city." Chicago architects Adler & Sullivan signed-on to produce plans and the Chicago-based Guaranty Construction Company was contracted to build the new speculative building. The site, measuring ninety-three by 116 feet, was cleared of a motley assortment of frame structures; construction was targeted to occur between March 1895 and March 1896. Then, in November 1894, the project's backer, Hascal L. Taylor, died. To rescue the project the Guaranty Construction Company bought the property and completed the project on schedule. On March 1, 1896 the *Guaranty* Building was officially opened to the public. Some two years later the *Guaranty* was renamed the Prudential Building due to its refinancing through the Prudential Insurance Company. The name *Prudential* has remained with the building ever since.¹⁶⁶

The result of Taylor's ambition was a thirteen story, 152-foot high skyscraper, the tallest in Buffalo. The *Guaranty* contained room for some 200 offices on its upper floors with retail spaces on its first and second; its 125,000 square feet were served by four passenger elevators. The *Guaranty* Building was one of Buffalo's first steel-framed skyscrapers and its only building wrapped by tons of orange terra-cotta. It stood tripartite in organization, a tightly-composed box with clearly defined retail, office, and attic zones.

With the elimination of all historical styles, principally classicism, the steel framework of the *Guaranty* Building was seen as a great trellis from which to hang, to drape, a host of geometric and foliate design motifs in terra-cotta. The *Guaranty*'s street fronts are replete with intricate patterns in an all-over coating of rectangles, circles, ellipses, and semi-circles; oval milkweed pods were a reoccurring theme. Above each of the primary street entrances the building's name emerges from a delicate leafy pattern. The *Guaranty*'s strong vertical elements are its "tendrils," its terra-cotta piers - each melding into a pseudo-cornice, a decorated frieze punctured by circular openings. Just above is a thin flat roof with an almost non-existent cornice slightly flared outward; the *Guaranty* is about *verticality* and any dissenting lines were not allowed.

Stout exterior columns, also of orange terra-cotta, feature capitals with an entwined "G" and "B" emerging from a thicket of vegetation. Interspersed between the columns are

large, quite unique, display windows with a canted glass top resulting in a "gift box" concept to showcase sale items.

The interior of the Guaranty Building is equally remarkable. It, too, is the object of profuse detailing and is embellished with colorful stenciling, stained glass, polished brass, and a delicate metal stairway that connects the first and second floors. Original chandeliers and sconces deliver a diffused and warm light to the elevator lobby and the corridors that provide access to the retail stores. The Guaranty Building, a sensitive and gentle structure, is a superb work of art. Its attenuated piers and proportions elevate it, granting *this skyscraper* "the force and power of altitude." Often praised as the finest product of the Adler & Sullivan firm, Buffalo's greatest skyscraper was also their last commission.

(133) Guaranty Building

PRUDENTIAL BUILDING.

BUFFALO, N.Y.





(134) Call Building

Call Building
San Francisco
Reid Brothers, San Francisco
1896

Civic boosters crowned this building one of the most splendid skyscrapers of the Victorian era, the "Queen of the Pacific Coast." The Call Building housed one of San Francisco's daily newspapers and the offices of many businesses. But one concern, a newspaper, was the building's namesake – the *San Francisco Call*. In December of 1856, *The Morning Call* began publishing its daily newspaper in the city that became the "headquarters" of the Gold Rush. By March of 1895, this prosperous enterprise was renamed the *San Francisco Call*, and thereafter, established itself as the Bay City newspaper.

In 1897 the *San Francisco Call* newspaper was purchased by John Diedrich Spreckles (1853-1926), an investor, sugar magnate, and steamship company owner. Spreckles proceeded to plan for a new and prestigious home for "his newspaper." He also opted for constructing San Francisco's tallest building, a building he hoped to name after his ty-

coon father, Claus Spreckles (1828-1908). It was Claus Spreckles who was known as the "Sugar King" after establishing the Bay Sugar Refining Company in 1863. This German-born capitalist established sugar cane plantations in Hawaii, sugar beet refineries in California, and in 1889, he founded a sugar refinery as far east as Philadelphia; his empire was served by the Oceanic Steamship Company – owned also by him. Some if not all of Spreckels' business concerns were headquartered in the Call Building.

Considered *the leading architectural firm* in San Francisco, Reid Brothers was summoned by John D. Spreckles in 1894 to present drawings for the planned skyscraper. Brothers Merritt and Watson Reid contributed to the design, but James was the principal form-giver. James M. Reid (1851-1943) was educated at McGill University in Montreal, the Massachusetts Institute of Technology, and at the Ecole des Beaux-Arts in Paris. His education, especially that from the Ecole, was reflected in the Call Building's Baroque Revival, and Beaux-Arts appearance.

Upon completion, the gleaming white Call Building stood sixteen floors, 315 feet tall. It had the distinction of being America's second skyscraper to be fully capped by a dome, the first being New York's Pulitzer Building (George B. Post, 1890). The Call's three-story dome was peppered with thirty-six Lucerne windows and was topped by an open lantern from which the great city could be surveyed. Anchoring each of the building's four corners was a small eight-sided turret topped with a ribbed dome. Exterior walls were of white stone and white glazed terra cotta. A two-story-high entrance arch, Ionic columns, finials, colonnades, and high-relief spandrels were prominent features of the Call's facades.

The Call Building was an instant sensation, popular with the public and with civic leaders. It was a place where San Franciscans could ascend to the tower's fifteenth-floor café; this was one of the first skyscrapers to have *public* dining on an upper floor.

The early morning of April 18th, 1906 proved to be a fateful day for the tallest skyscraper in San Francisco. By noon of that day the Call Building would be spewing-out black and gray smoke and soot, courtesy of San Francisco's Great Earthquake and Fire. Structurally the building was sound, the quake's effect was minimal. But fire ravaged the interior, igniting a floor at a time from the dome downward. Windows shattered and allowed fresh air in only feed the flames. Within twenty-four hours the building stood gutted...but it stood.

The Call Building was soon rebuilt and before long it again reigned as San Francisco's premier skyscraper. But by December of 1913, the *San Francisco Call* merged with the *Evening Post* and the result this union became the *San Francisco Call & Post*. The Call Building became known as the Spreckles Building, a rather insignificant change as compared to the indignities yet to come.

One of the most celebrated architects of the twentieth century, Le Corbusier, scorned the Spreckles Building in his book *Towards A New Architecture* of 1931.¹⁶⁷ The modernist designer's ire was raised enough to include a photograph of the Spreckles and comment mockingly: "The engineers of to-day find themselves in accord with the principles that Bramante and Raphael had applied a long time ago." Le Corbusier warned, "Let us listen to the counsels of American engineers. But let us beware of American architects. For proof:" An image of the Spreckles Building, captured after the 1906 earthquake-its walls

and domes in a near state of demolition-was held up to ridicule. It was the hour of the modernist.

In one of the great architectural tragedies of our age, the venerable Spreckles Building was stripped in 1938 of its original ornamentation and "Art-Deco-ized." Its five domes were removed, and its columns, arches, cornices and terra cotta enriched facades were sent to landfills. Local architect Albert Roller oversaw the renovation. Renamed the Central Tower its walls were streamlined with painted brick and inset sash windows – which still provide passersby with a full view of the offices' fluorescent lights glaring inside. In this instance the ravages of man outweighed the ravages of nature.

Ellicott Square Building

Buffalo

D. H. Burnham & Company, Chicago
1896

Downtown Buffalo's bastion of commerce and capitalism was erected over a century ago and was named the Ellicott Square Building in honor of Joseph Ellicott, founder of the city of Buffalo. At ten stories, and with a great wide presence, it commanded the skyline. Charles B. Atwood (1849-1895), a staff architect within the office of D. H. Burnham & Company, is credited with the design of this landmark office structure.¹⁶⁸ Upon completion the Ellicott Square Building was said to be one of the largest commercial office structures in the world.

Still standing, the Ellicott Square Building occupies an entire block, rises sheer from the sidewalk, and was constructed around a large courtyard with a glass and iron canopy hovering above the second floor. The first two floors are home to shops and restaurants, and above are hundreds of offices. The Ellicott Square's vast exterior is wrapped with cream-colored terra-cotta and acres of glass. Executed in a neo-Renaissance style, the building's facades are rich with 15th-Century Italian ornamentation. Unfortunately, this skyscraper's cornice was removed in 1971.

Architectural colleague Charles Moore (1855-1942) writes of his observations regarding so acclaimed a designer as Charles B. Atwood:

While with D. H. Burnham & Co. he designed the Ellicott Building in Buffalo; but during the last two years of his connection with the firm, the condition of his health made steady, concentrated work impossible although his mind was occupied with architectural problems. Tall, slender, of elegant figure and bearing, with a head remarkable for its beauty, with gray, lustrous eyes, a voice with rare charm and a diction that completed the spell, Atwood gradually changed from one of the most companionable of men and became a recluse. At the age of forty-six, with the greatest possibilities before him, and after having given up a position in which he was free to work out his conceptions without financial worries, he succumbed to his only enemy – himself. He died in Chicago in December, 1895.¹⁶⁹

American Tract Society Building

New York City

Robert H. Robertson, New York City

1896

1893, plans were filed with the City of New York for yet another skyscraper for lower Manhattan. The new building would stand at 150 Nassau Street, at Spruce Street, and occupy a plat of land measuring 100 by ninety-four feet. It would rise twenty-three floors, 306 feet.

The American Tract Society, once a publishing giant, was founded in 1825. It was touted as the world's largest publisher of religious – that is Protestant Christian – literature. Produced were thousands of religious books, hymnals, pamphlets, and *tracts*, leaflets of religious propaganda. It was this organization that sponsored the building of its own skyscraper headquarters to be aptly located on Manhattan's Printing House Square.

The Society chose New York architect Robert H. Robertson (1849-1919) to complete the plans for their new home office. Robertson was Philadelphia-born and attended Rutgers University, where he graduated in 1867. Early in his career he was employed as a draftsman in the office of architect George B. Post then located just a few blocks from Printing House Square.



(135) The American Tract Society Building, with its arched top and mansard roof, was one of the very first skyscrapers to boast a public restaurant on its top floor. The New York Tribune Building (Richard Morris Hunt, 1875) is on the left, the New York Times (George B. Post, 1889) stands on the right.

Robertson's design for the American Tract project was almost whimsical. It included an inventive top featuring a "game of solids and voids." Here the building retreats behind a three-story arcade, a brick "screen," decorated with classical references including egg-and-dart enriched cornices, lion heads, Corinthian columns, and terra-cotta angels hovering between arches. Fifteen-foot tall "messengers of God" rested at the 21st floor level and guarded the building's corners. Its giant hip roof was covered with barreled terra-cotta tiles and each of its four corners supported a giant metal globe. The twenty-third floor boasted a public restaurant and outdoor promenade, a thrilling place indeed from which to view the city. The American Tract Society Building was constructed as described in Robertson's drawings.

Shortly after the building's completion the noted architectural critic, Montgomery Schuyler, commented:

A much more effective feature, indeed the most effective feature in the sky line of the lower city, as seen from either river is the crown of the Tract Society building. This does not pretend to "belong" to the building, or to answer any utilitarian requirement. In fact, it is emphatically detached by the withdrawal of the building behind it. It is confessedly [sic] an extraneous and picturesque crowning member. It has been so carefully designed in scale that is effective and telling as far as it can be seen, and it would be rather petty to insist upon the illogicality [sic] of a feature which so completely justifies itself to the sensitive beholder.¹⁷⁰

Despite its famous top, the American Tract Society Building stands as six distinct "buildings" stacked like cartons. It does not exist as a noble entity, a singular architectural expression as espoused by Louis Sullivan. It is a weighty building, a *visually heavy* building. Despite the shortcomings of its parti, this office tower must be judged as a pioneer skyscraper where aesthetic and engineering struggles were still being waged in business' ascent to the clouds.

The American Tract Society has a steel skeleton that supports all the floors and walls. Exterior walls are composed of glass, granite, red brick and red terra-cotta. Initially, six hydraulic, Otis-manufactured elevators, on a daily basis whisked hundreds of workers and visitors to all twenty-three floors and to its 700 offices.¹⁷¹ Two light courts, roughly running north to south, measuring sixteen by sixty and seven by sixty feet, manage to distribute fresh air and sunlight to all portions of the building's core. Despite the general acceptance of skyscrapers by most, some people still fostered strange stories about these new buildings in general, and the American Tract in particular:

For example, a statement appeared recently in a local journal stating that a "tenant in the Tract Society Building was responsible for the assertion that the reliability of a timepiece was affected by the vibration of this building and in a degree in proportion to the height and that in fact on the top floor a clock had actually been known to stop." This discussion went so far as actually to foretell the unhappy condition of affairs if it were necessary to abandon the use of pendulum-clocks and depend upon some other form of clock mechanism. Now it happens to be the fact that in the office of D.H. Burnham, architect of Chicago, a most careful and methodical watch had been kept for over eight years of the structures which have been built under his supervision for this and any other contingency. I doubt if a severer test has ever been recorded than that of eighty-five miles an

hour for five minutes at a time which is on record in Mr. Burnham's office and this was not perceptible within any of the structures.¹⁷²

Fisher Building

Chicago

D.H. Burnham & Co., Chicago

1896

Peter J. Weber, Chicago

1907

Chicago's celebrated Fisher Building still stands in the South Loop in what was once a center of printing, binding, and publishing. Surrounding the Fisher were many loft structures, office buildings filled by insurance concerns, and the daily clamor of thousands of horse-drawn wagons, and, only later, the racket of the elevated train cars. The neighborhood is much the same today, sans the clopping hooves and clacking wood wheels.

The Fisher Building was constructed by Lucius G. Fisher II, a Windy City "paper mogul." It was completed as a speculative office tower standing eighteen floors, 230 feet high, and containing eight passenger elevators. The skyscraper was supported by a complete steel-riveted skeleton, extensive wind bracing, and by twenty-five foot piles anchored beneath massive spread foundations. It was reported that during its building 13 ½ floors were constructed in just fourteen days, an astonishingly rapid and record-setting rate. Only nine months after groundbreaking the Fisher Building was opened to tenants.

Perhaps fortuitously, this Gothic Revival extravaganza was placed diagonally across from the sober, somber, and altogether plain Monadnock Block of 1891. The Fisher is the Monadnock's ultimate foil what with its energized facades executed with salmon-colored terra-cotta. Where both have three-sided bays marching across their Dearborn facades the Fisher's are replete with a variety of *water-based creatures* – an unmistakable reference to the name of the office tower's builder. Included here are humorously-styled fish, crabs, snakes, salamanders, dragons, and sea shells. Gothic ornamentation, owing from the French and Belgian fifteenth century, includes escutcheons, trefoil and ogee arches, poppy-head finials, colonettes, and a host of fleur-de-lis. The Monadnock features lots of dark brick.



(136) Executed in speckled orange terra-cotta are dragon-like salamanders crawling over the building's surface. Their presence here, scampering down the wall in a menacing posture, adds a strange delight to the Fisher's façade. Photo by author.

In 1907, a twenty-story, 274 foot-tall office tower was grafted to the north wall of the original Fisher Building. This expansion was undertaken by architect Peter J. Weber (1864-1923).¹⁷³ This was a successful, more or less, joining of old to new and recalls that which also happened to the neighboring Monadnock Block. Again, the original was a more potent design.

Hotel Manhattan

New York City

Henry J. Hardenbergh, New York City

1897

The Hotel Manhattan was one of the great American skyscraper hotels of the nineteenth century. The Manhattan graced the northwest corner of Forty-second Street and Madison Avenue and it gave birth to a cocktail of whiskey tempered with a hint of sweet vermouth. Its footprint measured 200 feet along Madison Avenue and 121 feet along Forty-second Street.

At completion the Hotel Manhattan became New York City's tallest hotel. It stood sixteen stories, 250 feet above Madison Avenue and edged out the Netherland Hotel by sixteen feet. The Manhattan offered meeting and dining rooms, bars, and some four hundred guest rooms, all of which were served by four Sprague electric passenger elevators.

The design of the Hotel Manhattan was the brainchild of New York City-based architect Henry J. Hardenbergh (1847-1918). He was one of the most celebrated architects of his day and was a noted hotel and office building designer.¹⁷⁴ Hardenbergh was born in Brunswick, New Jersey, and at the age of eighteen entered the New York architectural office of Detlef Lienau as a student. In 1870, after five years training Hardenbergh opened his own architectural office. Afterward, and until his death, Hardenbergh's commissions grew in number and in prestige. Two years after his death the Hotel Manhattan was converted to office space. The "Manhattan," with a maraschino cherry, continues to this day.

Commercial Cable Building

New York City

Harding & Gooch, New York City

1897

Founded in 1884 in Lower Manhattan, the Commercial Cable Company was once one of America's mightiest communication businesses having pioneered transatlantic cable communication to Europe.

An often overlooked early skyscraper, the Commercial Cable Building stood twenty-one floors, 304 feet tall, which made it the seventh tallest in the city in 1897. Also, at \$2.7 million this building was listed as one of the most valuable structures in New York City. Despite the superlatives, the Commercial Cable Building was destroyed after standing some sixty years.

Officially opened on May 1, 1897, this office tower was tightly wedged between Broad and New Streets, just south of the New York Stock Exchange. The building's footprint measured forty-six by 154 feet which made it a thin mid-block slab. It faced, across New

Street, the east facade of the more famous Manhattan Life Insurance Building (Kimball & Thompson, 1894). Being surrounded by exchanges, banks, brokerages, insurance and government offices, meant that the Commercial Cable's 142,000 square feet of office space would be quite desirable. Beside the employees of the Commercial Cable Company, the building's tenants were mostly stock brokers.



(137) Commercial Cable Building

The Commercial Cable Building had six electric screw type elevators. Typical floors were so arranged as to accommodate small (nine by seventeen feet), medium, and large sized offices (fifteen by sixteen feet). A selection of seventeen office types were featured on each floor, many of which faced two light courts providing natural light and fresh air to tenants.

Much of the building's design recalled the great palace and ecclesiastic architecture of 16th century Europe. The steel-framed, stone-clad Commercial Cable Building was topped by two copper-covered domes which were its most distinctive architectural features. These domes, complete with Lucerne (dormer) windows, pilasters, and fanciful lanterns, were visible for miles throughout the city and far out into New York bay. Squeezed between the domes was a copper-sheathed mansard roof which housed the penthouse floor. The Commercial Cable's main Broad Street facade was embellished with arcades, oval windows, stringcourses, balconies, and various carved spandrels.

English-American Building

Atlanta

Bradford Lee Gilbert, New York City

1897

The English-American Loan and Trust Company sponsored the erection of this, Atlanta's oldest still-standing skyscraper. Trim and compact the building rises from the narrow street corner formed by the intersection of Peachtree and Broad streets in downtown Atlanta. Soon after completion the public termed this the "Flatiron Building" despite it having four sides.¹⁷⁵ Its narrow prow is trim and compact, a svelte wedge of glamorous offices.

A prominent corner entrance simply suggests the location of the building's main access, gone are the obligatory arches, oversized columns, and effuse decoration. If there is an architectural statement here it is best described by the handsomely proportioned three-sided bay windows, strong belt courses and of course the prow. The English-American is perfectly wedded to its site; it hugs the sidewalk, skillfully redefines the corner, and electrifies residual space.

Atlanta's "Flatiron" was constructed with a steel skeleton and originally included electric elevators. Glass accounts for an unusual, but welcome, percentage of the skyscraper's facades; Internal steel columns and girders allow for this. If the tripartite facade organization was erased from Gilbert's drawings the resultant structure would have been more modern, more striking, more potent. As it currently stands the English-American Building is an important architectural landmark.

Gillender Building

New York City

Berg & Clark, New York City

1897

This was one of the most celebrated and famous skyscrapers erected in the 19th century. It stood at One Nassau Street, on the northwest corner of Wall and Nassau in the heart of Manhattan's financial district. Occupying perhaps the most covetous address on Earth, its neighbors were institutions of the caliber of the New York Stock Exchange, the Sub-Treasury, the House of Morgan, and more than two dozen internationally renowned and influential banks. Furthermore, it was located only steps from prominent stock, bond, commodity, deed, utility, transportation, communication, government, precious metals, and clearinghouse concerns; in short, this tower marked the epicenter of capitalism.

Augustus Theophilus Gillender, born in Hyde Park, New York, in 1843, sponsored the erection of this \$500,000 building. Gillender was a principal in the law firm of Gillender, Fixman & Mumford, which had its headquarters high in the tower. The Gillender Building replaced an Italian Renaissance-inspired, seven-story building constructed of stone and brick. By the 1890's high-rise buildings were already replacing mid-rise buildings.

Upon its completion, the Gillender was New York's eighth tallest skyscraper. The architectural style of the Gillender Building was Italian Baroque Revival and its walls sported columns, arches, urns, and on top was a lantern-topped metal dome. From its top could be viewed the New Jersey shore, New York's harbor, the newly completed Statue of Liberty, and the Brooklyn Bridge.



(138) Gillender Building

The Gillender Building, a thin slab tower, measured twenty-six by seventy-three feet in plan. It rose without setbacks to the roof of the seventeenth floor, some 219 feet above the sidewalk. Above this rested a square tower with a cupola that topped out at 273 feet, twenty floors above Nassau Street. It was constructed with a full wind-braced steel skeleton, its exterior was dressed with granite, limestone, brick and terra cotta and it was supported by a pneumatic-caisson foundation. The Gillender's general contractor was the firm of Charles T. Wills & Company of New York. Two other New York firms, the Hecla Iron Works, supplied architectural and ornamental iron and bronze work, and the Atlas Cement Company supplied the tower's Portland cement. The Okonite Company of Passaic, New Jersey, supplied rubber insulated electric wires and cables. In short, the Gillender Building was the most modern office tower on the market, and it was adver-

tised as completely fireproof too.

During its life, this skyscraper was rented by financial firms of all types and sizes. Despite this, the Gillender was deemed obsolete, not necessarily from a technological standpoint, but from an economic one. When completed in 1897, the Gillender Building was one of the wonders of the city. It was erroneously called by the *New York Times* the "tallest skyscraper in the world, its tower rising 300 feet above the street..." Still, no accolade could save it from ruin. In 1840, the parcel of land upon which stood the Gillender was valued at \$55,000. By 1910 its value climbed to \$1,250,000, which was the purchase price paid by the Bankers Trust Company for the privilege of erecting their own thirty-nine-story landmark at that location. The Gillender Building holds the dubious honor of being the tallest building demolished up to that time - 1910. To make way for the Bankers Trust Building some 250 men were employed in two shifts to bring down the Gillender. In addition to the Gillender Building, the older Stevens Building, which formed an L around the Gillender and fronted on both Wall and Nassau Streets, also required demolition for the construction of the Bankers Trust Building.

The demolition began by cutting a big shaft down through the center of the tower so that debris could be tossed to the ground. The night crew was enlisted to cart away this material by using trucks that only at night could transverse the canyons of Lower Manhattan. To prevent possible accident from falling steel girders or blocks of granite a huge, two-story tall scaffold was constructed over Nassau Street extending the entire width of the Gillender. Tragically, two workers were seriously injured from falling steel beams, one was a fatality. By June 17th, 1910, and after only forty-five days of demolition work, the great Gillender was wiped away forever.

Waldorf-Astoria Hotel

New York City

Henry J. Hardenbergh, New York City

1897

During the last decade of the nineteenth century Fifth Avenue was lined with stately mansions, some of which have survived to this day. Earlier decades established the "Avenue" as residential, but that would quickly change. Two descendants of New York's most prominent families will forever alter the development of this world renowned thoroughfare.

The opulent home of William Waldorf Astor's father stood on the northwest corner of Fifth Avenue at Thirty-Third Street. In 1891 Astor razed the mansion and in its place he had constructed the Waldorf Hotel. The Waldorf opened on March 13th, 1893 and had 450 guest rooms and 970 hotel employees. Its construction cost the princely sum of four million dollars.

William Waldorf Astor persuaded his cousin, John Jacob Astor IV (1864-1912) to do likewise.¹⁷⁶ John Jacob Astor IV ordered his mother's mansion, located on the southwest corner of Fifth Avenue and Thirty-Fourth Street, demolished. This provided a choice development site immediately north of the Waldorf Hotel. John Jacob Astor commenced building the Astoria Hotel, completed in 1897. Far larger than the Waldorf it boasted 550 guest rooms, forty banquet rooms, exclusive shops, ladies' parlors, restaurants and cafes, bars and a barber shop. Its lobby was unexcelled anywhere in New York and it

boasted a palatial ballroom ninety-five feet long and three stories high. Here was the epitome of lavishness, of opulence, of unabashed wealth.

As planned, the newly completed Astoria would be linked to the already established Waldorf, and so they were. A 300-foot marble corridor named the Peacock Alley linked the hotels; its moniker referred to the society women who paraded about with the latest and most expensive fashions. Both developments were now to be thought of as one, as the greatest hotel in the city – the Waldorf-Astoria.

The Waldorf-Astoria Hotel sported facades that today would be considered quite theatrical. Architectural sources include the Dutch Renaissance, French Chateauesque, and the more elusive Wagnerian; in short "European eclecticism" best describes the hotel's style. New York's newest luxury hotel now boasted over 1,000 guest rooms, and sixteen stories that rise 214 feet tall.

Once judged one of the most celebrated hotels in the history of New York was, by the late 1920's, eyed by real estate developers. Plans circulated that a building, designed to be the world's tallest, was planned at this site. Rumors turned into truths and the hotel's days were numbered. To some the unthinkable occurred on May 3rd, 1929. That day marked the closing of the venerated Waldorf-Astoria.

Within weeks work crews began pulling down the landmark of earlier generations, the destiny of the moneyed, and the posh playground of the powerful. Demolition contractors found the staunchly built hotel stubborn to wreck, but it did yield. Its inglorious end was magnified further when wreckers, acting legally, dumped its remains from barges fifteen miles out in the Atlantic Ocean. There, still rest stone statuary, classical columns, marble floors, and the echoes and secrets of the once great edifice.

Polhemus Memorial Clinic
Brooklyn, New York
Marshall Emery, Brooklyn
1897

The Polhemus Clinic might very well be the first example of a skyscraper hospital – anywhere. Like the grandiose buildings on Manhattan's Park and Fifth Avenue's this imposing structure's plastic facades of Beaux Arts decoration dazzled passersby. This one differed from those in many respects, principally it stood as an eight-story clinic which served the poor and was used by medical students of the nearby Long Island College Hospital. There were no eight bedroom apartments and garden terraces here, just the surrounds of a rough and tumble Brooklyn neighborhood of three-story row houses.

This hospital building was erected in memory of Henry Ditmas Polhemus, a member of a prominent and early Dutch family and regent of the Long Island College Hospital from 1872 to his death in 1895. Polhemus' wife, Caroline, donated \$475,000 to erect and endow the building. In December of 1897, after two years of construction, the brick and stone-faced skyscraper hospital was completed.



(139) Polhemus Memorial Clinic



(140) Onondaga County Savings Bank Building

Onondaga County Savings Bank Building

Syracuse

Robert W. Gibson, New York City
1897

Still standing on Salina Street in downtown Syracuse is this nineteenth century skyscraper originally known as the Onondaga County Savings Bank Building. It was a major contribution to this city, one of the first steel skeleton skyscrapers there, and perhaps the grandest grand dame downtown. An urban community recognized as an industrial center, Syracuse was once known as "Salt City" due to its many salt works and salt springs. Nineteenth century prosperity brought with it a new type of architecture where buildings, taller than neighborhood steeples, not only emerged on the skyline, they gave Syracuse a skyline. One that contributed much to the cityscape was the Onondaga County Savings Bank.

It rises eleven stories and is a significant turn-of-the-century example of an "out state" attempt at skyscraper construction. Stylistically the Onondaga is of the Renaissance Revival, and though a contemporary of Buffalo's Guaranty Building, it draws nothing from the "organic" school of Louis Sullivan. Syracuse's entry is dressed in white stone with arches, balustrades, stringcourses, and classical pilasters. It is a building of stacked boxes, of striated walls where no verticality is celebrated. The Onondaga is more traditional than experimental.

Upon completion, the building's first floor was occupied by the Onondaga County Savings Bank, as one might expect, and also by Syracuse's First National Bank. Upper

floors of the skyscraper that cost \$525,000 to build, were devoted to leased tenants, who through rents, would help defer the relatively high cost of the new skyscraper.

The company, which sponsored the building's construction, was named after the Onondaga tribe, Native American's indigenous to this locale.

The Onondaga County Savings Bank Building was the work of Robert W. Gibson (1854-1927) an architect born and schooled in England. He arrived in America in 1881 and first practiced in Albany, New York. Later, Gibson would relocate to New York City. There he would complete such celebrated structures as the New York Clearing House (a domed "palace", 1896), U.S. Trust Company Building (a ten-story Romanesque pile, 1889), and the New York Coffee Exchange (1895) – all demolished and all once located well within the general confines of Wall Street. Gibson was also noted for the many churches and large country homes he designed throughout New York and New England.

Empire Building

New York City

Kimball & Thompson, New York City

1898

One of Manhattan's more delightful early skyscrapers is the Empire Building. Still standing at Seventy-one Broadway in the financial district, this one-time office building was converted in the mid-1990's into residential condominiums. It has retained every bit of charm on the exterior but the same cannot be said regarding the building's interior. The Empire Building was constructed with the financial backing of banker and capitalist J. P. Morgan, and it was, at its completion, the home of the United States Steel Company, an "investment" of Morgan's.

The Empire Building's vitals measure seventy-eight feet on Broadway, and 224 feet along Rector Street, it stands twenty stories, 304 feet tall. The Otis Company originally outfitted it with ten hydraulic passenger elevators. Calculations dictated that ten elevators would be sufficient for the tower's 340 offices. For the architects, Francis Henry Kimball and George Kramer Thompson, the Empire represented their continued success in skyscraper design that arguably began with their Manhattan Life Insurance Building of 1894.

The Empire Building is an architectural tour-de-force of the neo-Classical style. Facades are symmetrical and feature pedimented windows, arched openings, and multiple cornices. The 18th and 19th floors are recessed from the north wall plane and are set into copper-clad walls. Here, various offices are segregated on the façade by sets of two-story tall Corinthian columns. Reentrant corners mark the top three floors, a traditionally Baroque design device employed to heighten a structure's architectural drama.

By architectural contrivance there can be no mistake just where the Empire's main entrance is. Four columns of polished granite, like bookends, frame an arched entrance. Each column's capital is adorned with egg-and-dart, cornucopias, and five-pointed stars. Limestone eagles perch upon limestone globes fixed to the top of each column and complete the patriotic symbolism, the patriotism mustered during the concurrent Spanish-American War.



(141) Empire Building



(142) Wyandotte Building

Wyandotte Building

Columbus

D.H. Burnham & Co., Chicago

1898

With the Wyandotte Building the Chicago School arrived in central Ohio. D.H Burnham & Company designed this office building in the manner of the best contemporary work found in the "Windy City." Strong corners, embedded with steel columns, rise unbroken from sidewalk to top and lend a vertical air to the structure. Three-sided window bays, rippling around this skyscraper, emphasize "facade texture" and architectural interest. A flat top, an abundance of glass, and a clean and direct thrust from the sidewalk place this squarely in the Chicago School tradition.

This Deshler National Bank & Associates sponsored this skyscraper's construction to serve as the headquarters for the Wyandotte Building & Loan Company of Columbus; the Wyandotte moniker refers to a North American Indian people who inhabited this region of Ohio. Upon its completion the eleven-story building was touted as the "tallest in central Ohio" and Columbus' first steel-framed skyscraper.

The Wyandotte's characteristics are typical fair for an 1890's skyscraper. Its steel frame, supporting concrete-poured floors topped with hardwood, was wrapped with fireproof tile. The building's heat source was derived from cast iron radiators that drew steam produced by a giant basement boiler. Each office floor was fitted with a central corridor of marble flooring and marble wainscoting. Stairways were of cast iron with iron railings and

marble treads. Its lobby featured a double-height space with marble walls and floor. Two electric elevators ran the height of the structure. The Wyandotte's footprint measured fifty-seven by sixty-one feet, above which, was a sixteen by thirty-three foot light court that afforded natural light and fresh air to office tenants. The Wyandotte Building remains an architectural landmark in downtown Columbus.

Washington Life Insurance Building

New York City

Cyrus L.W. Eidlitz, New York City

1898

This was just one of Manhattan's early, and much admired, steel framed skyscrapers – the Washington Life Insurance Building. It towered nineteen floors, 273 feet over the intersection of Broadway and Liberty streets, just south of the famous Singer Building. It was constructed by the Washington Life Insurance Company of New York, a firm founded there in 1860. The building served as the company's headquarters which were located on the third floor. The remaining space was let out to other firms.

The skyscraper fronted fifty feet on Broadway and 159 feet on Liberty Street. The exterior was composed of a three-story base of pink granite with floors four through nineteen sheathed with white limestone. Washington Life's top was energetic. Here was a picturesque and steeply pitched tiled roof, a roof peppered with dormer windows and topped with iron cresting. The inspiration was the German Renaissance. The Washington Life Insurance Building was demolished in 1966 and replaced by the shear-rising and austere Marine Midland Building¹⁷⁷, its aesthetic antithesis.

Sullivan's Condict Building (originally Bayard Building) was on an obscure side street, and while a brilliant and arresting piece of work, after the first pictures and discussion of it in the architectural press, it was wholly forgotten, purposely forgotten by the profession, who resented and feared the challenge of ideas.¹⁷⁸

Bayard-Condict Building

New York City

Louis Sullivan, Chicago

Lyndon P. Smith, New York City

1899

In Manhattan's East Village, on Bleeker Street between Lafayette and Broadway, stands a modest-sized skyscraper constructed at the end of the nineteenth century. It occupies a mid-block location and in its immediacy are a dozen loft buildings of the same vintage. The building, was named the Bayard (pronounced bay-yar) in deference to a bank president, William Bayard, whose enterprise was destroyed by fire on this very site. Within one year of completion, the building was renamed the Condict Building after the property's owner, Silas Alden Condict. Currently, and officially, this landmark skyscraper is known as the Bayard-Condict Building.

This New York skyscraper has a complete steel frame and is enclosed with a system of curtain walls. Along Bleeker Street the Bayard-Condict measures eighty-three feet and it pushes back 100 feet deep. Side and back walls are faced with brick while the Bleeker Street – or main façade – is completely covered with some 7,000 pieces of white glazed terra-cotta – all manufactured by the Perth Amboy Terra Cotta Company. It was con-

structed as a speculative office building offering 107,900 square feet of rental space. The structure was originally furnished with two passenger elevators and it boasted a two-story high penthouse with skylight. The Bayard-Condict Building stands thirteen floors, 162 feet above the East Village sidewalk.

As in the earlier Wainwright and the Guaranty, Sullivan substantially employs terra-cotta in new and inventive ways. Here, again, the tripartite formula was employed with the building's piers and straw-like columns "stretched" between base and capital. Above the thirteenth floor is an eruption of sculptural elements that includes angelic figures locked into a maze of organic forms and geometric gymnastics. No such figures appear on any of Sullivan's other work, but then neither do the Greek / Renaissance-inspired beading and egg-and-dart detailing that span behind the these figures.

The Bayard-Condict is the only work of Sullivan in New York City. Its compound arches, winged figures, Chicago windows, and abundance of foliate detailing make this century-old structure an oddity in Manhattan; perhaps the New York eye was not conditioned to such an aesthetic departure from the norm – there. Upon its completion reviews were mixed, but since then, it has been bestowed landmark status.



(143) Bayard-Condict Building. Photo by author.



(144) McClurg Building

McClurg Building

Chicago

Holabird & Roche, Chicago

1899

One of Chicago's smallest skyscrapers is the McClurg Building. This tidy and smallish box, supported by a full steel frame, measures eighty feet wide, 150 feet deep, and stands nine-stories, 125 feet tall. It is supported by a foundation which includes both piles and caissons. When completed, this skyscraper's street-wall was viewed as the ultimate in transparency. Its chaste grid of terra-cotta coated piers and spandrels embraced approximately 9,000 square feet of glass. This much glass on the street face was vital. The building's side walls are totally windowless and the McClurg originally had no light shafts or skylights; occupants received daylight only from the front and rear walls. Other tall mercantile buildings remain in Chicago, but the McClurg's thin bones and glassy walls mark it as one of the antecedents of Chicago's newer – and taller – skyscrapers. Noted Chicago architect, Peter B. Wight (1838-1925), comments on the McClurg's design:

In design the front is an illustration of what Holabird & Roche have so often done before, - showing that when windows much wider than their height set horizontal *masses* in opposition to vertical *lines*, the application of such a treatment to the high building problem gives more satisfaction to the eye than any other that has been attempted. The simplicity and refinement of detail in this street front is another illustration of the tendencies of architectural design at Chicago, especially where terra-cotta is used.¹⁷⁹

The McClurg is hidden on Wabash Street, just south of Adams. Its noisy mid-block location places it adjacent to the elevated train tracks of the Wabash line, and just south of an iron-trussed commuter station perched level with its second floor. Here is a microcosm of fin de siecle Chicago where immediate access to public transportation was paramount to a skyscraper's tenants, customers, and the ultimate economic success of the skyscraper itself.

Boston real estate investor, Frederick Ayer, sponsored the construction of the McClurg Building as an office and loft structure. It was named after its major tenant, A.C. McClurg & Company, a bookseller and stationer. Alexander Caldwell McClurg (died 1901) located his business on the first floor while a host of other small firms occupied the remaining upper floors. McClurg's wholesale and retail business began in Chicago as Jansen, McClurg & Company in 1872. In 1886 Jansen retired and the company was renamed the A.C. McClurg & Company. The publishing and retail house went on to be known world over for its many awards and quality publications. Currently the McClurg Building serves a broad mix of small businesses but without its namesake tenant. The A.C. McClurg & Company, and the building's delicate cornice, disappeared long ago.

*In recognition of the fine relations established between piers, windows, and wall surfaces; the excellence of proportions throughout; and the imaginative use of original ornament.*¹⁸⁰ Decree of the Architectural Landmark Commission

Gage Building

Chicago

Holabird & Roche, Chicago

Louis Sullivan, Chicago

1899



(145) Gage Building. Photo by author.

Chicago businessman and real estate developer Stanley R. McCormick was the force behind the construction of the Gage Building and its two neighbors immediately south.¹⁸¹ Often referred to as the "Gage Group," this trio of architectural excellence has been a fixture on fashionable Michigan Avenue for more than a century. These three loft structures were once the centers of operations for three wholesale and retail millinery merchants and were the destination of every housewife and seamstress in the city.

The building furthest south, at 30 South Michigan, was the one-time home of the Theodore Ascher Company. It was completed in 1898 and stands six stories. Just to its north, at 24 South Michigan, is a seven story building that served as the headquarters of the Edson Kieth Company. It, too, was completed in 1898. Both were designed by the firm of Holabird & Roche and bear facades that are overwhelmingly glass which is "framed" with red brick and red terra-cotta; these take a direct approach, clear, without nuances. First floors were devoted to retail sales while upper floors housed offices, sewing rooms, and various assembly areas. These diminutive skyscrapers possess complete steel frames, have passenger and freight elevators, and complete curtain walls for their street facades.

Along with the Ascher and Kieth buildings McCormick also planned for a more prominent structure, the tallest of the three and the "flagship" of the group. Located most north, at 18 South Michigan, was to be erected the Gage Building. The Gage Brothers & Company was also in the millinery trade and promoted itself with confidence:

Gage Millinery

Gage Hats are on display and for sale at all leading millinery departments and establishments. Ask your dealer for Gage Hats.
Producers of Correct Millinery.¹⁸²

A City of Chicago building permit was issued for the Gage Building on November 1st, 1898, and construction commenced on March 1st, 1899. The Gage Brothers Company insisted that their building be distinguished from the other two newly completed buildings and engaged the noted architect, Louis Sullivan, to design an appropriate façade. And so it was done. In December, 1899, the Gage Building was pronounced completed. It stood eight floors, 112 feet high. The building was dressed with white terra-cotta and was one of Sullivan's finest attempts, replete with foliate and naturalistic forms. The cost of the "Gage Group" was \$300,000, a paltry sum by current standards. In 1902, Holabird & Roche was summoned for a *vertical* addition to the Gage Building; it was raised to twelve floors, 168 feet. All of Sullivan's decoration was replicated, and as before, attached at the cornice level.

These three skyscrapers were, and are still, important elements in Chicago's landscape. For their time they were considered very modern architectural expressions. They were, after all, quite minimalist in appearance, especially the southernmost two, simply skin and bones. The immense areas of glass were almost unprecedented but were requirements for the tasks at hand – inside. Ample quantities of sunlight were needed for the daily needle-work performed by the hundreds who labored within; here are perfect examples of outward form being dictated by interior function, this a modernist tenet. Though the three millinery companies that first occupied the "Gage Group" have long gone, the buildings remain as nineteenth-century reminders of an age of treadle-driven sewing machines and starched collars, and as architectural landmarks of the highest caliber.

*But one cannot call the roll of Sullivan's works without paying a tribute to the one outstanding building of his later years: the Schlesinger and Mayer Building, now that of Carson, Pirie and Scott...Here Sullivan used a bold system of horizontal windows and gained a legitimate accent at the corner by a rounded glass bay: a clean, logical solution for the problem, more decisive in every way, it seems to me, than his skyscrapers.*¹⁸³

Carson Pirie Scott Store

Chicago

Louis Sullivan, Chicago

1899

This building is about displaying things and displaying *itself*. Here stands a shimmering jewel box with all kinds of goodies inside, goodies for sale - the stuff of consumption. Carson Pirie Scott & Company uses this piece of architecture as a marketing device, a superbly successful tour-de-force in the battle for consumer dollars and market share. Here, form does follows function with a design that takes this concept to its ultimate conclusion. Here, too, is sheer architectural brilliance.

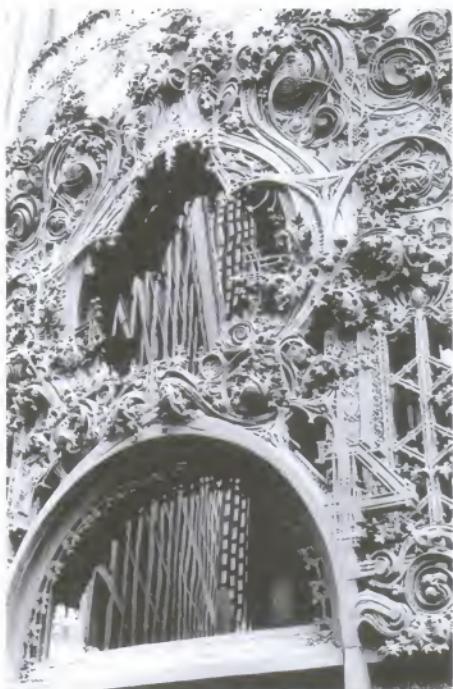
One of Chicago's first large post-Fire (1871) department stores was that of Schlesinger and Mayer.¹⁸⁴ By the mid 1890's this successful enterprise realized expansion was necessary and local architect Louis Sullivan was summoned to prepare the plans. The result was a three-bay-wide, nine-story retail store that fronted only on Madison Street. His adept handling of the situation with regard to natural sunlight, honest expression of structure, and a simple approach to detailing would be continued in subsequent store expansions. In 1903, the opportunity again was presented to Sullivan for yet another expansion of the department store. Continuing the language already established on the 1899 structure, Sullivan drew the plans for a three-bay wide, twelve-story structure that was to occupy the actual corner of the intersection, and unlike the earlier project, seven bays would march south along State Street giving the retailer a coveted double-street exposure. This segment's completion in 1904 coincided with the sale of the store to the Carson Pirie Scott & Company.¹⁸⁵ In 1906, one final expansion, designed by D.H. Burnham & Co., pushed five more bays south on State Street.¹⁸⁶ Carson Pirie Scott insisted there be a seamless match with their existing Sullivan-designed retail masterpiece, and so there was. Continuity of expression was paramount and as a consequence subsequent generations are able to appreciate this extraordinary architectural ensemble.



(146) Carson Pirie Scott Store. Photo by author.

When completed in 1904, the fulcrum or corner addition immediately propelled the Carson Pirie Scott Store into the annals of architectural immortality. Nothing quite like it had ever been attempted in America. The Chicago Loop was now home to a large department store of modern design, a department store rising twelve stories, 168 feet. Carson's was primarily a big box of retail space that, only secondarily, provided office space – for the company only – on the upper floors. Here stood a building, a skyscraper, with a steel frame, multiple passenger and freight elevators, and a sophisticated curtain wall that featured some of the most compelling ornamentation anywhere.

Carson's facades are overwhelming horizontal with continuous spandrels decidedly thicker than its vertical piers. The exterior walls of the first two floors consist of what is essentially an iron and plate glass screen. First floor display windows are surrounded by foliate-inspired frames of painted cast iron which were designed to enhance and emphasize the all-important view inside. Lush, richly detailed and profuse best describe the plant forms depicting flowers, tendrils, vines, leaves and even the architect's initials LHS. These contrast with the upper floor windows of the skyscraper but also pay homage to the traditional base-shaft-capital organizational principal, and, more importantly – at least economically, the enticing inside of potential customers. Upper floor facades are composed of Chicago Windows separated by an off-white terra-cotta. A recessed twelfth floor loggia and major cornice were restored in 2006.



(147) The Carson Pirie Scott Store's main entrance is marked by a most robust example of foliage. This twisting mélange was executed in iron then painted a forest green. Notice in the lower right the superimposed letters "LHS" serving as the architect's signature. Photo by author.

(148) Nature abstracted: leaves, tendrils, and seeds dance in a "composition of life." Sullivan proclaimed a building should grow like a tree from the seed of a single all-encompassing idea. Here in a cast iron panel is the seed. Notice the screw heads, fasteners that secure the panel to a substrate, which is attached to a cast iron column that supports its share of the building's load. Total interdependency also defines "organic architecture." Photo by author.

At Carson's corner, the intersection of State and Madison Streets often touted as "The World's Busiest Corner," stands the store's entrance pavilion. Instead of a conventional corner Sullivan choose to insert at this location an event, a visual treat, a rounded glass and iron membrane in which to pass trough and partake of the great American pastime of consumption. Conceptually it joins two twelve-story walls like the spine of a book and is the most exquisite hinge ever produced. And there resides a dichotomy of Carson's; it simultaneously pushes upward and outward. The Carson Pirie Scott Store is tall, every inch of it horizontal.

Park Row Building

New York City

Robert H. Robertson, New York City

1899

The Park Row building has always cut a distinctive silhouette on New York's skyline; it still boasts Manhattan's *first* "twin towers." When completed, this was New York City's tallest building, and America's second tallest - 166 feet short of the Philadelphia City Hall. Here, the architect's response was a splendid effort, a daring skyscraper that a century later still captures the imagination.

Once known as the Ivens Syndicate Building, the building located at Fifteen Park Row was constructed by a consortium of venture capitalists¹⁸⁷. It stands today much as it did then, twenty-nine stories tall, 382 feet above the sidewalk. Architecturally, this early skyscraper recalls the double-towered Baroque churches of Germany, Poland, and Bohemia. More specifically, the Park Row echoes the architecture of the Church of Saint Vincente da Fora in Lisbon, Portugal, a structure designed by Filippo Terzi and constructed between 1582 and 1627. The Park Row Building has a symmetrical front façade which is "layered" as it rises. Four caryatids, and 16 figures on the domed towers, are attributed to sculptor J. Massey Rhind. The two three-story towers, or temples, atop the building's main "box" are capped with copper-clad domes. Each of these small aeries served as artist studios, hideaway apartments, and well appointed offices from which to oversee the growth of the city.

The redoubtable architectural critic, Montgomery Schuyler, lamented the increasing height of New York's buildings and took particular note of the Park Row Building:

Then came the polyhedron of the St. Paul to the ultimate height of twenty-five stories, and in due time that *horned monster* (italics added), the Park Row Building, will surpass it five stories more.¹⁸⁸

A "horned monster"! Schuyler found no beauty in this skyscraper. What he harshly viewed as perhaps extraneous and/or foolish – the temples - might well be judged today as charming architectural relics from the past, satisfying rooftop appendages used to enter the Park Row into the height record books.

The Park Row Building rises without setbacks on the block bounded by Park Row, Ann, and Beekman Streets in lower Manhattan. The skyscraper has a complete steel skeleton with a curtain wall of stone, brick, and glass. Its foundation consists of some 4,000 end bearing wooden piles driven through forty feet of sand to rest upon solid bedrock. Construction spanned three years and the building's price tag was \$3.5 million. Originally the Park Row Building contained almost 1,000 offices which provided workspace for up to

4,000 people. Its circuitous floor plan allowed all employees access to large windows providing natural light and fresh air before the advent of air conditioning and fluorescent lighting. An anachronistic oddity, metal shutters, originally served all alley façade windows.

This skyscraper's exterior walls are cream-colored limestone, alley walls are of white brick; in total there are eight million bricks. Some 8,000 tons of steel were used and are included in the building's total weight of 50,000 tons.

It was here, in the Park Row Building, that the American inventor Frank Julian Sprague introduced a new and improved version of the electric elevator for passenger use. Sprague installed eight such devices in the Park Row, elevators that featured direct-drive electric motors, counter-weights, a cable drum, the safety brake, and a means to providing smooth starting and stopping at each floor level.



(149) Park Row Building with the American Tract Society Building (Robert H. Robertson, 1896) to the left.



(150) St. Paul Building

St. Paul Building

New York City

George B. Post, New York City

1899

A bold architectural expression best characterizes this once-extant, stand-alone, columnar skyscraper. It rose tier upon tier, floors paired, with each set separated by a well-defined belt course. At its opening in early 1899 the Park Row was dually praised *and* harshly criticized. Some saw it metaphorically, it was a spine-like tower where each belt course was interpreted as a vertebrae. Despite the controversy, this was one of the loftiest and most recognizable skyscrapers in turn-of-the-century Gotham.

The St. Paul Building stood on the southeast corner of Broadway and Ann Streets in lower Manhattan. It rose twenty-six stories, 313 feet and commanded the skyline. It dwarfed nearby stores, shops, hotels and theaters. It especially towered over its namesake, the venerable St. Paul's Chapel constructed in 1766.¹⁸⁹ The Chapel added a 200-foot tall steeple in 1794 making it, then, the tallest building (technically) in New York. At the turn of the twentieth century a starker contrast could not be had, the verticality of the headstones in the Chapel's graveyard seen against the tall backdrop of the St. Paul Building.

Construction of the St. Paul Building commenced in 1897. Its foundation consisted of a flat bed of one-foot-thick concrete laced with iron grillage. This "plate", reaching down thirty-two feet, rested upon a thick layer of compressed sand. For nearly six decades, this skyscraper's 19,859 tons were successfully supported by this foundation.

In plan the St. Paul Building was a five-sided polygon¹⁹⁰. All offices, an average of sixteen per floor, were quite close to large windows affording tenants natural sunlight and fresh air. An additional luxury included a sink in each office. The building was originally outfitted with six Otis electric passenger elevators.

The outer skin of the St. Paul Building was of white limestone. Its walls boasted dozens of pilasters, and its top was marked by a full entablature supported by fluted columns. Garlands and lions' heads also added much to a building some eagerly wished to bring down. In 1958, the St. Paul Building was demolished, its ornamentation sent to a landfill. In its place rose an indelicate thirty-story building. Now this behemoth faces the graveyard that its predecessor did.

Chapter Four

Steel Pens and Steel Pins

1900-1919

Long Hours and Tough Guys

Skyscrapers were designed in much the same manner as with any other large building. Presentation drawings were completed to entice the client or some ad hoc committee into choosing *this* design and *this* firm; these were tools employed to secure a commission for the firm. These also served to illustrate just how the finished product was going to appear, although more often than not the finished product looked nothing like the initial schemes. Construction documents, drawings showing details, materials, and methods of construction, were instrumental in bringing the design to fruition. Simply put, the hundreds of drawings generated for a skyscraper were joined by bound volumes of specifications, and a multitude of written requests and construction bulletins.

Presentation drawings were executed using gouache, pastel, charcoal, conte crayon, watercolor, or graphite on paper. Conte crayon on tracing paper was an effective tool of communication but so too was the pastel and ink wash on drawing paper mounted on a thick paper board. Inks of various colors were applied to treated linen for particularly handsome renditions and today are considered masterpieces. Architectural models were particularly compelling. Constructed of wood, plaster, or cardboard, these models conveyed information in three dimensions and visually explained the project in a way few drawings could.

The architect's or draftsman's work station consisted of a drawing table, stool, and sometimes a work table. The drawing table supported the drawing board, an item that "should be made of well-seasoned, straight-grained pine, the grain running lengthwise..." Other tools were the T-square, irregular curves, triangles (also of finely sanded wood), and a compass of polished steel. Most important was the draftsman's ink and his steel-tipped pens. The following "recommendations to the draftsman" appeared in 1901:

The ink we recommend for the work...is the T.S. Co.'s superior waterproof liquid India ink. A quill is attached to the cork of every bottle of this ink, by means of

which the pen may be filled. Dip the quill into the ink, and then pass the end of it between the blades of the drawing pen. Do not put too much ink in the pen, not more than enough to fill it for a quarter of an inch along the blades, otherwise the ink is liable to drop. Many draftsmen prefer to use stick India ink; and, for some purposes, this is to be preferred to the prepared liquid ink recommended above. In case the stick ink is bought, put enough water in a shallow dish (a common individual butter plate will do) to make enough ink for the drawing, then place one end of the stick in the water, and grind by giving the stick a circular motion. Do not bear hard upon the stick. Test the ink occasionally to see if it is black. Draw a fine line with the pen, and hold the paper in a strong light. If it shows brown (or gray), grind a while longer, and test again. Keep grinding until a fine line shows black, which will usually take from fifteen minutes to half an hour, depending upon the quantity of water used. The ink should always be kept well covered with a flat plate of some kind, to keep out the dust and prevent evaporation. The drawing pen may be filled by dipping an ordinary writing pen into the ink and drawing it through the blades, as previously described when using the quill. If liquid ink is used, all the lines on all the drawings will be of the same color, and no time will be lost grinding...India ink will dry quickly on the drawing, which is desirable...

Architects and draftsmen were further admonished regarding the treatment of the steel-tipped drawing pen:

When the ruling, or compass, pen becomes badly worn, it must be sharpened. For this purpose a fine oilstone should be used. If an oilstone is to be purchased, a small, flat, close-grained stone should be obtained, those having a triangular section being preferable, as the narrow edge can be used on the inside of the blades...To sharpen, separate the points and only do such sharpening at a trifling cost.¹⁹¹



(151) An architectural office of 1900; skyscrapers were born in places such as these.

Skyscrapers, by their very nature, demanded larger firms to see to their design and completion. During the first decade of the twentieth century a typical large firm consisted of the principals, or owners of the firm, senior designers, staff architects, job captains, drafters, office boys, a bookkeeper, and an office girl complete with typewriter. In all, some twenty-five employees was the norm in a *large firm*. If a particularly formidable skyscraper project was secured by one firm occasionally another would be sought out to help expedite the commission. Inside the office were the necessary spaces to conduct business: a large communal drafting room with rows of drawing tables and wooden stools, private offices, business offices, and a client waiting room with an adjacent meeting room. A library usually existed in some form and consisted of pattern books, and volumes concerning architectural and art history, mounted and rolled drawings, and folios of building vignettes. Electric lamps suspended from the ceiling and large sash windows provided the majority of light. What was the nature of those who occupied the wood swivel chairs? Noted Manhattan-based architect Louis De Coppet Berg described the requirements contemporary architects had to possess:

The modern successful New York City architect must be not alone an artist, but he must have marked abilities as a civil engineer; he must outrank, if possible, the mechanical engineer in his knowledge of electricity, hydrostatics, heating and ventilation, and the sanitary engineer in the knowledge of plumbing, and withal be an accomplished financier...¹⁹²

If this were not enough, John Taylor Boyd, Jr., writing for *The Architectural Record* implored the American architect thusly:

If, therefore, the skyscraper is not yet worthy of the public's admiration, it is the duty of the architect to make it so. He should view the perfecting of tall building architecture as the next great task confronting American architecture.¹⁹³

And how much did they earn? During this time most staff architects in a large firm earned just less than \$2,500 per year, Job Captains and senior architects annually earned \$3,000. Of course owners and principals earned far more. By comparison, those who toiled *inside* the great skyscrapers toiled for considerably less:

Here is a wage scale for employees in 1902: Elevator men: first year, \$50 a month; over one year and less than five years, \$52.50; over five years, \$55. Janitors: first year, \$45 a month; after one year and less than three years, \$47.50; after three years, \$50. Office rents in those days averaged \$1.50 to \$1.65 a square foot.¹⁹⁴

And what were the rewards for the men whose hands put together the great skyscrapers?

Gazing skyward at the construction workers-America's new folk heroes-atop the Metropolitan Life Tower one spectator was overheard to say, "How much do you suppose them fellows get for that?"

"Don't know...heard some one say they get about four dollars a day."

"Hully gee...Bricklaying is good enough for me."¹⁹⁵

In 1885 the ironworkers that helped construct skyscrapers like the celebrated Home Insurance Building earned \$2 per day--for each terribly long day. Their very labor was sac-

rificial: these men embraced a sense of professionalism, a sense of kinship, and a sense of mortality—all for just cents per hour. Then, unions were non-existent and ironworkers earned twenty-two to twenty-five cents per hour. It was recorded in 1890 that the iron-worker had the highest accident and mortality rates of all construction trades. Rare was the ironworker who lasted more than five years in the profession. In 1904 twelve percent of ironworkers were killed on the job and between the years 1900 and 1920 2,000 iron-workers perished on the high steel.¹⁹⁶

Tough guys.

(152) Two of New York's greatest going up, the New York Times on the left and the Flatiron on the right.



Because of greedy developers and ruthless contractors a loose confederation of iron-workers in Chicago formed the Bridge Builder's Mutual Association as early as the 1880's. Should one of their own become sick, incapacitated, or die on the job this group of twenty pledged to help their "brother" and his family. By 1890 the Association had expanded and took a new name, the Bridge and Construction Men's Union and in 1892 a stronger organization emerged, the Bridge and Structural Iron Workers Union which consisted of 2,700 members. In 1893 the first eight hour work day was instituted. Despite attempts by big business and large contractors to quell union organizing the International Association of Bridge and Structural Ironworkers was founded in 1896. Representatives from six cities, New York, Chicago, Boston, Cleveland, Pittsburgh, and Buffalo

drew up the charter. There were now 3,700 members with the greatest representation from New York with 1,500 members. Only now did the ironworker's daily rate change, it doubled from \$2 to \$4 per day. Union locals sprang up in every large city and by 1901 membership swelled to 6,000. By 1902 there were some 10,000 members and by 1907 11,574 were counted in the rank and file.



(153)



(154)

These views reveal typical office settings c.1910. Office layouts conform to the building's structural system, the ordered grid of columns and girders. Furniture is threaded through the grid and spatial zones are created, areas for production, conferencing, storage, and privacy. Exterior walls are marked by large light-emitting, operable windows; suspended light fixtures provide general lighting. General practice was to have no worker more than twenty-five feet from a window; ideally office workers were located in an outer ring of offices which wrapped around a core of corridors, restrooms, closets, and elevator shafts.

The top view depicts a building with a metal skeleton (iron or steel) while on the lower concrete was utilized; large steel-reinforced concrete girders span between concrete columns which are supported by haunches, ledges of enormous strength.

Men with tan derbies, stiff-collared white shirts, and bow ties bossed the work of dozens of men without tan derbies, sporting instead sun-baked scalps and shoulders. Impatient, anxious men, foremen and superintendents with loud voices cried directions over the shrill sounds of steam engines, hammers, and rivet guns. Noise everywhere. Furnace gas and kettle smoke traveled in clouds while the better-dressed oversaw the work and the workers.



(155) Spud Wrench. Photo by author.

Beam walkers. High-steel men. Skywalkers. Cowboys of the Sky. Ironworkers. By any other name these men adopted the spud wrench as their symbol - a steel pin, a heavy two-foot long steel pin with a wrench head and tapered shaft used to match up the holes in beams, girders, and columns. This was *theirs*. The spud wrench was the most important tool in their arsenal and it was used to align the pieces to be joined. Quickly a red-hot rivet was substituted and the pieces fastened together; this, by one hand, hundreds of feet up. Although all were structural ironworkers dozens of operations with specialized names and tasks were required by skilled workers high up on the iron: derrick men, connectors, hoisters, riveters, bucket-up men, rivet catchers, rivet heaters and signalmen. The water boys satisfied all.

Some men, it was said, were particularly good at this type of work. What apparently was only a New York phenomenon was the inclusion of a high percentage of Native Americans, or more precisely Canadians, working as ironworkers. These were the Woodland Indians of Canada, the Mohawk people of Kahnawake (Caughnawaga) near Montreal. Some Mohawk Indians also hailed from upper New York and together they formed an astonishing workforce. Weekly these men would commute long distances leaving their homes and families for the opportunities of steady employment and a relatively good income. It was generally thought that the Mohawk, more than most others, were more agile, mechanically adept, and clear headed at great heights. This belief, of course, was always controversial with any gifted "balance theory" unsupportable. Nonetheless, it was the Mohawks who built virtually all of New York's skyscrapers in the early days, and by 1920 there were several hundred Mohawks erecting towers in Manhattan.

Other ethnic groups were represented too, the most prominent being the German, English, Irish, Polish, Bohemian, and Jewish. In other cities the ethnic makeup of the iron-worker was similar. Perhaps more than a dozen ethnic groups contributed to the erection of towers like the Chrysler, Chanin, or Empire State. Contrast the ancient temples, pyramids, and castles of Europe. Generally only one culture had a hand in their creations. The "melting pot" concept, America's oft-elusive ideal, was made manifest with the skyscraper; people had to cooperate to attain a goal and a paycheck.

No matter what city, ethnic group, or union local there was always one celebration that bound all ironworkers together, the custom of the "topping out." To signify the placement of the last and highest piece of structural steel a small evergreen tree was secured to the last beam and hoisted into place. Usually an American flag also accompanied, and the steel beam was painted white providing a background for the signatures of dignitaries, corporate executives, and all workers involved including the ironworkers. The history of that ceremony is muddied but was most often associated with the northern European immigrants' customs of house and barn raising celebrations. With the skyscraper the celebration has come to mean that the project was completed without loss of life, and as an honor and thanks to all those who contributed and to those still laboring. The "topping out" was a bittersweet event as it also signified that the ironworkers' role was over.

Public Embraces Tall Novelties

Between the years 1900 and 1919 America's cities, large and small, became the homes to hundreds of skyscrapers. These tall buildings borrowed from an amazing range of architectural styles that encompassed a variety of cultures, periods, and continents. Inspiration could be gleaned from anywhere - and it was: Italian campaniles, German castles, Dutch guild halls, Roman and Greek temples, and French cathedrals. The American downtown became a design stew and the public, by and large, relished its diversity.

Architecture became another diversion joining the ranks of Buster Brown and his dog Tige; the 1901-published *The Wonderful Wizard of Oz*, a story that featured the Emerald City – a splendid place of green glass skyscrapers depicted in the 1939 movie also entertained. Traveling circuses, nickelodeons, tent-covered religious revivals, and vaudeville kept the masses sated with entertainment. Baseball was the national pastime as evidenced by ticket sales and the staggering weight of the bleachers' peanut shells. In the presidential office sat the Trust-Buster while Ida Tarbell sought to bust Rockefeller's Trust with her mighty pen.

In 1913, the sometime salacious but always controversial Armory Show opened in New York. Here were first displayed the avant-garde paintings and sculptures of Europe's and America's finest artists. Chicagoans and Bostonians were treated too, and as in New York, protests arose there. American heroes and heroines included film greats D.W. Griffith, Lillian Gish, Douglas Fairbanks, Mary Pickford, and Charlie Chaplin; they did what they could to keep up morale. William Jennings Bryan and Frank Lloyd Wright gave hope to some, while Captain Smith and his Titanic dashed it for others. Ragtime was the gift of Scott Joplin, slapstick the gift of Fatty (Roscoe) Arbuckle, and vaudeville was the beneficiary of the talents of George M. Cohan, Eddie Foy and countless others. By 1914 the rumblings in Europe became too loud for the world to ignore and civilization was plunged back centuries, screaming like an infant...into the abyss. A worldwide influenza epidemic rounded out the first two decades of the twentieth century forcing stone-carvers to labor over headstones rather than keystones. At the century's dawning there

were 8,000 licensed automobiles; by 1920, over eight million cars were registered. And, over the span of those two decades, America had four skyscrapers claim the title of "world's tallest building." From sea to shining sea this country counted over 600 skyscrapers in places both big and small. And then there were the flagpole sitters. Such were the times.



(156)

At the completion of the Singer Building in 1907 height competition was in fever pitch. This British-produced drawing depicts selected British, Irish, and Scottish buildings with America's entry as tallest. Corporate bravado emerges cementing product and skyscraper, where the corporate headquarters becomes a major marketing tool. A portion of the caption reads: The Singer Building overtops all others just as the sale of Singer Sewing Machines exceeds those of Singer Sewing Machines exceeds those of all other makes. Over 2,000,000 sold annually.

(157)

This drawing was produced in 1899 corresponding to the completion of New York's St. Paul Building. The heights of a noted church, a government building, a national monument, a skyscraper, and the other miracle of the day, an ocean liner, are compared. The Kaiser Wilhelm Der Grosse, the German luxury liner completed in 1897, measured 655 feet long, the St. Paul Building stood 313 feet.

Superlatives were paramount and competition between nations was all important. The Kaiser Wilhelm Der Grosse sank in 1914 and the St. Paul Building was demolished forty-four years later. Fame is fleeting.

On October 1st, 1902, the Flatiron Building was officially opened. It was tall, 285 feet, but by no means a record holder. Fourteen months later, on December 17th, 1903, Wilbur and Orville Wright made the first "human-carrying, powered flight." The Wright brothers boasted an altitude of approximately ten feet and traveled a distance of 852 feet. They were propelled through the air three times farther than the Flatiron Building was tall. This *machine extraordinaire* would have profound implications, the skyscraper less so. The

Flatiron was the architectural sensation of its day whereas the Wright brother's achievement went mostly unknown for some five years. Each celebrated the conquering of height but in a vastly different manner; steel, brick, and glass parleyed with gasoline, wood, and canvas. Each technology invaded the sky and neither would ever retreat.

The skyscraper image was heralded by manufacturers, publishers, newspapers, and all types of memento and souvenir producers. Post cards, glassware, and pot-metal building models were available to countless visitors to America's skyscrapers during the early twentieth century. Elevators and electricity, just to name two items still foreign to rural America, could be experienced in big city skyscrapers. At this time few Americans, urban or rural, had flown, and the opportunity to view the world from far above was irresistible to many. Though the public observatory was born during the 1880's and 1890's its popularity grew in most large cities from 1900 to World War I. The public was fascinated, though some were fearful strong winds would surely topple these structures with them on top. These public aeries developed into major tourist destinations adding admittance fees to the coffers of the building owners.



(158) The caption of this c.1915 view reads: An army aeroplane in flight over New York. A mobile observatory glides over the stationary types.

(159) Detroit's Ford Building (D.H. Burnham & Co., 1909) stands tall, 19 floors, 250 feet, with a bi-plane flying nearby. These are paired precisely because they were icons of the early twentieth century; inspiration, optimism, and national pride were epitomized by these objects-as-symbol. The plane was positioned into the image by a skillful photographer. Interestingly no automobiles, Fords or others, appear.

One of New York's more compelling skyscrapers of this time was the Singer Building, once the "world's tallest building." The public embraced this structure and marveled at its great height. Visitors from around the globe ascended to its viewing deck, purchased and mailed postcards of the tower, and delighted in the views of the great metropolis



from on high. At the completion of the Metropolitan Life Building, and afterward the Woolworth, the pilgrimage and ritual was repeated. The elevator ride was almost as gripping as the view with some visitors making multiple trips. In many other cities the phenomenon was similar. Tourists visited by the millions and memories were made.

American painters, sculptors, and photographers contributed their talents to the understanding of the skyscraper form, especially in New York and Chicago. Some artists used their talents to deride the "mundane" forms of the skyscraper while others celebrated, indeed rejoiced, in the new tall forms. Before and after World War I rich portrayals of Manhattan's greatest buildings were produced by the likes of Joseph Pennell, John Marin, Childe Hassam, George Bellows, Charles Sheeler, Georgia O'Keefe, and John Storrs. Noted photographers Alfred Stieglitz, Edward Steichen, Alvin Langdon Coburn, Paul Strand, Margaret Bourke-White, and Lewis Hine contributed immeasurably to the understanding of the skyscraper and its context. Their compositions, some of the finest camera work done anywhere, brought the romance of the skyscraper to the common man. Over the decades the skyscraper was made visually and mentally graspable to those where no tall buildings existed. Poets, filmmakers, and writers also responded to the skyscraper. Carl Sandburg left a superb body of work describing the essence of Chicago's tallest buildings.



(160) The skyscraper became part of American culture early in the infancy of the art-form. Here New York's Park Row Building is seen from the eyes of two toasted gents, the caption reads: Oh! Those fine buildings, what a pitiful sight, none of them, soberly standing upright.

During the early twentieth century some in the architectural press loathed the skyscraper for any number of reasons; the public opted toward admiration. As a result of naysayers and generally based upon questionable motives, some cities enacted height limitations to counteract the negative effects of "blocked sunlight, stagnant air, and overcrowded sidewalks." Fire, too, was always a concern although there were no statistics showing the skyscraper more susceptible to total devastation than the common two-story house.

Claude Bragdon, in *The Architectural Record* in 1909, observed:

Already in the business districts of New York and Chicago, there are solid blocks of sky-scrappers, and if the building of one of them continues unrestricted the lower stories will become (as many of them are to-day), mere cellars, and the streets deep canyons, dark at noon-day, the play-ground of germ-laden winds.¹⁹⁷

Some architects and city hall types tried to solve these issues architecturally, while others attempted to decree the skyscraper out of existence. Pittsburgh, Boston, Chicago, Minneapolis, Philadelphia, and Los Angeles were just some of the cities where height restrictions were enacted, and where height restrictions were eventually rescinded. With proper zoning, it was argued, the sky was the limit and pedestrians would not be annoyed by the "unpleasantness" generated by these urban novelties. Sunlight and fresh air, never really absent, would again become a plentiful commodity they thought. Skyscraper proponents, many of whom were architects, countered that, even a two-story house can cast a fifty-foot shadow.

During the pre-World War I era skyscraper opponents also cited "packed streets and sidewalks" as negative effects of concentrating skyscrapers in America's cities. Those worries were refuted in the following passage:

A 40-story building occupying half a city block will supply a million square feet of office space, but it would require 20 square blocks of one-story buildings to supply as much. To supply the 30 million square feet of office space in Chicago, 600 blocks-six times the area of Chicago's present Loop-would be needed. If the 100 million square feet of office space in New York were in one-story buildings, the whole island of Manhattan wouldn't be large enough to hold them. Instead of solving the traffic problem, one-story buildings actually would create an impossible volume of traffic on the streets. All the movement now handled vertically by the elevators of office buildings would have to be taken care of horizontally by busses, streetcars, taxicabs or sidewalks. This is a fundamental reason for office buildings being skyscrapers.¹⁹⁸

By 1910 several attempts were made in Chicago to come to terms with the "excessive" height of its office buildings. Some "activists" successfully petitioned the city government to enact a height limit of 260 feet. Earlier, there was in effect a 130-foot limit, then a 155-foot limit, then a return to the 130-foot limit. As a result, Chicago's skyline was stunted, a plateau without imagination. New York once had limits too, but they were by-and-large abolished years before allowing Manhattan's skyline to soar far beyond Chicago's. In 1916 a new zoning code dealing with skyscraper heights was employed in New York. Buildings could rise to almost any height if they obeyed formulas governing setbacks, tower sizes, and street widths.

A report released in 1916 tallied the skyscrapers of New York, and contrasted their numbers with all other buildings on the Island of Manhattan. Researchers discovered that the average building height in Manhattan was 4.8 stories. Out of 92,749 structures in Manhattan, 1,048 stood ten floors or more, the equivalent of only one percent of all buildings there. Ninety buildings measured over seventeen stories, fifty-one over twenty floors, and nine structures reached over thirty stories.¹⁹⁹ It is difficult to understand those who saw the skyscraper as menacing or threatening when there were relatively few sky-

scrapers that constituted the world's mightiest skyline.

Despite the critics' lamentations skyscrapers proved that they were here to stay. Taller buildings became more plentiful and were designed with imagination and verve. Skyscrapers evolved into habitable works of art, their walls were draped with decoration-becoming delightful canvases of stone and terra-cotta. The public still came, ate in the cafes, bought flowers, did their banking, and got their hair cut. And they rode the elevators, sometimes just for fun.

Soon other forms of delight emerged with the popularity of the skyscraper as urban legends and contemporary superstitions were perpetuated by the public. One such belief insisted a building's thirteenth floor was somehow an unlucky location. Triskaidekaphobia, the superstitious fear and avoidance of the number thirteen, has a documented history of several thousand years, yet, those few who suffer from it held sway with developers and their potential tenants. The thirteenth floor was banished early, probably at the turn of the twentieth century. Of course it was not until the first skyscraper of thirteen floors was erected that such a superstition could emerge, architecturally speaking. Not until 1884, with the completion of the thirteen-story Washington and the fourteen-story Produce Exchange buildings in New York could this superstition be applied. Owners of tall buildings everywhere started labeling the thirteenth floor the fourteenth. The absurdity of course is that every building with thirteen levels did indeed have a thirteenth floor no matter how it was identified. According to an Otis Elevator spokesman eighty-five percent of American skyscrapers have "hidden" their thirteenth floors. Others did not concern themselves with superstitions, they wrote poems about skyscrapers instead.

Prayers of Steel
By Carl Sandburg

Lay me on an anvil, O God.
Beat me and hammer me into a crowbar.
Let me pry loose old walls.
Let me lift and loosen old foundations.

Lay me on an anvil, O God.
Beat me and hammer me into a steel spike.
Drive me into the girders that hold a skyscraper together.
Take red-hot rivets and fasten me into the central girders.
Let me be the great nail holding a skyscraper through
blue nights into white stars.

Carl Sandburg (1878-1967)

Prayers of Steel first published in *Cornhuskers*.

Sandburg, Carl. *Cornhuskers*. New York: Henry Holt and Company, 1918; Bartleby.com, 1999. www.bartleby.com/134/. 7/21/2006.

*Was up in the tower can get plenty of fresh air here, Fritzie*²⁰⁰

*Dear daughter this is from papa here up 394 feet from St.*²⁰¹

*In the distance looms the Montgomery Ward Tower, from which the 'watchdog,' can scan the whole lake front [sic] when his duty impels him to do so.*²⁰²

Montgomery Ward Building

Chicago

Richard Ernest Schmidt, Chicago

1900



(162) Montgomery Ward Building

The Montgomery Ward Building is yet another example of a large American concern using its headquarters building as an advertisement. This strategy had no negative connotations whatsoever, rather, it was viewed as a brilliant commercial tool in the right hands, and the right hands in this case belonged to the world's largest mail order house.

Aaron Montgomery Ward (1844-1913), a New Jersey native, sought fame and fortune in Chicago and found both in abundance. Arriving from Niles, Michigan, in 1865, he brought with him only the business experience of a small town merchant. By 1872, and with his new-found partner, George Thorne, the Montgomery Ward & Company was launched. This soon-to-be multinational corporation was founded in a livery-stable loft

with a dry goods catalog consisting of a single sheet. By 1887, Ward purchased property on fashionable Michigan Avenue as a site upon which to build the city's tallest skyscraper.

Montgomery Ward & Company required a building that was to function both as corporate headquarters and as warehouse center. Architect Richard Ernest Schmidt (1865-1959)²⁰³ responded with just that, a building with storage on the lower floors and office space located far above – all in the same structure. Its footprint measured eighty-six feet wide on Michigan Avenue and 163 feet deep along Madison Street. It was designed with a complete skeleton of steel on the inside while its outside surfaces were of buff-colored brick, terra-cotta, and marble.

After some eighteen months of construction, and \$2 million spent, the Montgomery Ward Building was ready to be shown to an eagerly awaiting city. It was proclaimed "The Tallest in Chicago" and so it was; it topped out at twenty-five floors, 394 feet above the Michigan Avenue sidewalk. In elemental terms what was constructed was a rectangular box topped with an elongated tower with a pyramidal cap. The lower portion, or base, consisted of thirteen floors. The tower added twelve more floors, all of which had unencumbered views in all directions. After all, the Montgomery Ward stood as America's second tallest skyscraper trailing only the 154-foot taller Philadelphia City Hall.

Inside the Montgomery Ward Building were multiple office spaces, entire floors devoted to merchandise storage, mail rooms, cafeterias and other necessary areas. This was the home office to nine regional offices located throughout the country, with Mr. Ward's office no doubt high in the tower.



(162) This is a view of the rarely observed south façade of what was briefly the world's second tallest skyscraper. That which gave it record status was its tower, in this view it is recessed back from the cornice and not visible. Photo by author.

Stylistically, the Montgomery Ward's tower was the first of some one dozen American skyscrapers that have emulated Venice's campanile of the piazza San Marco. Further Italian Renaissance borrowings included richly decorated entrances, arcading, cornices, and Ionic columns. One design element not borrowed, but what must have been a fantastic sight, was its gilded pyramidal top. Architect Louis Sullivan, the "American with fresh ideas," witnessed no fantastic sight; he was no fan of neo-Renaissance architec-

ture and the subsequent "borrowing" of dowdy and trite European forms. The father of some of the greatest skyscrapers ever conceived, scolded architect Schmidt within just one year after the Montgomery Ward Building's completion: "The architect did not give the building any rest, but as to the remainder of the structure – it seems an ill-compounded salad, with a rather rancid New-Yorky flavor."²⁰⁴

The Renaissance lantern at the very top marked the site of the public observation floor. Though considered small by today's standards, an experience there was most likely unforgettable. How great it must have been, to only hours before, have exited a train fresh from the fields of central Illinois and ascend in an elevator to this spot. This was the highest point above ground in America excepting the very top of Philadelphia's City Hall. Messages on contemporary postcards reveal the infectious desire of visitors to ascend to the top of the Montgomery Ward Building, and of course share their excitement with the folks back home. Some postcard messages were professionally composed both promoting and validating the skyscraper's height:

Sing a song of Post Cards –
This is from the Sky –
Five and twenty Stories –
How is that for High!!!

another...

I came to the city Chicago
I sought out the number and street
So here I am up in the Tower
Three hundred and ninety four feet

There would be no misunderstandings when the height of prominent skyscrapers was called into question; honor was at stake and Montgomery Ward & Company knew it.

Perhaps the most notable architectural element of the building was affixed to its very top, an eighteen-foot-tall sculpture / weathervane christened *The Spirit of Progress*. Like the tallest skyscraper of its time, the Philadelphia City Hall with its famous "Penn" statue, the Montgomery Ward Building too, required an "elevated" artwork and it got one. But there the similarities stop; Chicago's was allegorical, gilded, female, outstretched and partially clothed. *The Spirit of Progress* was considered racy, *William Penn* was not. Curiously, *The Spirit of Progress* clutched a flaming torch and a caduceus, neither of which have much to do with the mail-order business. Nevertheless, *Spirit* worked her way into the advertising literature of Ward's and quickly became the symbol of the company...along of course with its skyscraper home nicknamed "The Busy Bee-Hive."

The sensation generated by its "world famous skyscraper" ended much too quickly. Its height ranking fell to third, and then plummeted further into oblivion. Furthermore, the Company, falling victim to its own success, demanded larger quarters and in 1908 sold its namesake skyscraper and relocated some two miles away. Throughout the following years the pyramidal top was erased, *The Spirit of Progress* was dismantled and discarded, and the tower's once lanky appearance was diminished with the addition of four floors to the lower "block." This once admired destination of sellers and stock boys, of typists and tourists, became blackened by age and neglect. It still stands, but is a ghost of its former, glorious, self.

Railway Exchange Building

Milwaukee

Jenney & Mundie, Chicago

Herman Buemann, Milwaukee

1901

This twelve-story skyscraper was built by real estate businessman Henry Herman to house law, insurance, and railroad concerns. It is *the only* skyscraper outside Chicago that was designed by the celebrated Jenney & Mundie firm.

The Railway Exchange, a fine example of the Renaissance Revival style, is vertically divided into clearly defined base, middle, and top. Its facades are covered with Italian Renaissance detailing, such as a large arched entrance of stone that is trimmed in egg-and-dart and garlands. Terra-cotta cartouches, dentils, and two-story classical columns are also employed. Sadly, its decorative cornice was removed.

It is interesting that Jenney & Mundie looked to the Renaissance for Milwaukee's Railway Exchange after having designed other structures that were considered "more modern." The Railway Exchange used "modern" technology on the inside - steel skeleton, brick and glass curtain wall, electric lights and elevators - while its exterior reflects a more conservative approach.

Temple Bar Building

Brooklyn

George L. Morse, Brooklyn, New York

1901

Located near Brooklyn's waterfront and its landmark bridge stands this peculiar early office skyscraper. Once the tallest building in Brooklyn, the Temple Bar ranked as one of the first New York skyscrapers constructed in a borough other than Manhattan. The building's puzzling name, Temple Bar, alludes to the old City of London, its courts, and its barristers. Here was a turn-of-the-century bastion for Brooklyn's attorneys.

The Temple Bar's architect, George L. Morse (1836-1924), was born in Maine and studied architecture while under the employ of noted architect Jarvis Wheeler. In 1860, Morse opened his own practice. He no doubt delighted in designing this office building complete with three fanciful cupolas inspired, perhaps, by the recently completed Park Row Building across the river. Nonetheless, these copper-clad "oddities" top a rather conventional structure. The building rises without setbacks, is laid up in tan brick and is accented with a similarly colored terra-cotta. There are the obligatory Renaissance columns, pedimented windows, arched entrance portals, brick quoins, lion heads, garlands, and weighty belt courses. This is an altogether competent design, but not a great one.

The grouping of floors, as expressed externally by multiple belt courses, reveals a somewhat confused scheme. It offers a façade of stacked floors, a building in layers, the antithesis of the Sullivan-esque skyscraper. Two pronounced courses separate the facades into five-story segments with the top two floors strangely unresolved regarding their roll in the overall design hierarchy. A timid cornice tops these and prepares the viewer for the final extravaganza – the cupolas. Idiosyncratic best describes these cupolas, these... rooftop baubles. Modeled after the French mansardic variation referred to as cyma reversa, these curvy extensions hurl the Temple Bar into the realm of the French

Baroque. Steel and iron supports formed these structures' underpinnings while sheets of copper were hammered into place to serve as the cupolas' outer surface. Hooded windows and metal cresting completed the ensemble. These still reign supreme.

Frisco Building

St. Louis

Eames & Young, St. Louis

1902

The Frisco Building was an office tower that once was the home to many railroad concerns. It was a graceful, early 20th-century skyscraper with well-disposed facades influenced by the nearby Wainwright Building.²⁰⁵ A strong two-story base, devoted to commercial and retail purposes, was surmounted by nine-story office block, or shaft, where the design emphasis was upon the vertical. Uninterrupted piers connected top to bottom, and stretched from the third through to the eleventh floor. Here the spandrels, and the windows, were recessed giving prominence to the slender, vertical brick bands. The Frisco's top floor, the twelfth, was marked by a terra-cotta string-course and a prominent stone cornice above. This skyscraper did indeed celebrate the new and the modern as applied to turn-of-the-century skyscraper design. The Frisco Building no longer graces downtown St. Louis.

Broad Exchange Building

New York City

Clinton & Russell, New York City

1902

Upon completion, the Broad Exchange Building was billed as America's biggest building, a title it held till 1906. This skyscraper rises twenty floors, 277 feet tall, and it houses 326,500 rentable square feet. It was constructed by a Manhattan business consortium as speculative office space and delivered the best and most modern facilities available. Only the finest materials were used throughout, and to serve the hundreds of business people who worked in the building were eighteen high speed electric elevators.

Located at Twenty-five Broad Street, the Broad Exchange Building holds the street edges that define its perimeter, 107 feet on Broad Street, and 236 feet on Exchange Place. In plan this skyscraper resembles a distorted T shape. Architecturally this is a fine example of a classically-inspired skyscraper, complete in tripartite form. The building's base is faced with gray granite while higher floors are of tan brick. The Broad Exchange's interior public spaces are simply sumptuous. The marble-rich lobby and adjacent corridors feature forty-six marble pilasters executed in the Corinthian style; each is finished with gilt capitals.

The Broad Exchange Building must be understood in the context in which it was erected. The time was just after the turn-of-the-century during real estate boom years, especially in Manhattan. The corner of Broad Street and fifteen-foot-wide Exchange Place was one of the busiest locations in the busiest city, on the continent. It was here, between Exchange Place and Beaver Street, the New York's Curb brokers met to trade stocks and bonds.²⁰⁶

Coming out of the tavern (Fraunces) and its memories of bygone days, we are almost startled by the sudden transition into modern life. This is emphasized by

the appearance of the famous "Curb" market, that curious assemblage of outdoor brokers whose market place is not far from the old Tavern. Day in and day out, rain or shine, business proceeds without interruption in the open air by this novel organization. Costumes change, according to the vagaries of the weather, but nothing interferes with business. The buildings on both sides of the street directly opposite the crowd are filled with clerks signaling (sic) orders or receiving messages from the Curb. Dozens of telephones with an attendant at each can be plainly seen from the sidewalk and the frantic motions of the operators trying to deliver urgent orders form one of the illuminating features of life on the Curb.²⁰⁷

The Broad Exchange Building played a major role in this commercial activity. No doubt runners, clerks, brokers and reporters teemed within the building's confines and were positioned at its windows. This ritual began in 1865, at this location, and continued there until 1921 when the Curb Exchange moved indoors. It was then, that this organization renamed itself the American Stock Exchange.

*...the Flatiron Building itself was spectacular, rising so sharp, so thin, so clean, so tall, pointing upstream in the mingled traffic of the two most famous streets in the world.*²⁰⁸

Flatiron Building

New York City

Daniel H. Burnham, Chicago

1902

This tall wedge was the most famous skyscraper in America following the turn-of-the-century, despite the fact that it was *not* the tallest, *nor* was it the first fashioned in the form of a triangle. The Flatiron Building was ceaselessly photographed - still and motion pictures - and was the subject of countless essays, drawings and paintings. This skyscraper captured the imagination of the public as perhaps no other had done. Its dramatic form, the result of an architectural parti that celebrated an idiosyncratic site, combined with substantial height and timeless beauty were the makings for not just another urban landmark. The Flatiron Building was destined for more.

Previous to 1900 this triangular patch of Manhattan was occupied by two and three-story, nondescript, commercial buildings. The site was bordered by 22nd Street to the south, Fifth Avenue to the west, with Broadway to the east. The wedge's acute angle pokes slightly into 23rd Street. This was the site chosen by the Fuller Construction Company to support its corporate headquarters. The Burnham firm in Chicago was summoned for plans. Demolishing the smattering of structures commenced in early 1900 and was over within a few months.

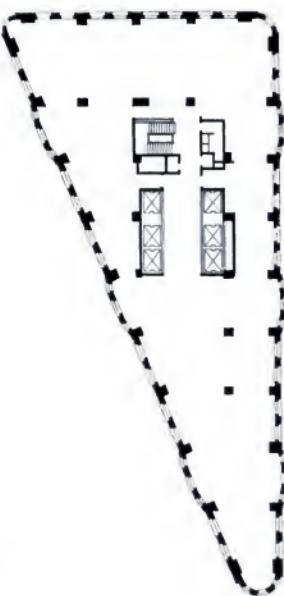
The Massachusetts-born George A. Fuller (1851-1900) founded one of the largest 19th-century construction firms. Fuller Construction occupied offices in Chicago and New York City and they were one of the first firms to erect buildings with steel skeletons. Fuller built quality buildings throughout the country but practiced extensively in Chicago and New York City.

Excavation for the "Fuller" Building did not extend overly deep because bedrock depth was reported to be not greater than forty feet. Piling were driven to "refusal point" and steel construction commenced. The skyscraper was erected by means of a complete

steel skeleton, a frame that was extensively wind-braced. Limestone and terra-cotta were lifted into place and secured onto the metal frame.



(163) The iconic Flatiron Building



(164) A mid-floor plan of the Flatiron Building.

The "Fuller" Building was completed on October 1st, 1902. The City awoke to a new giant – this one rising twenty-one stories, 285 feet. Its dimensions were impressive: 190 feet on Broadway, 173 feet on Fifth Avenue, and 87 feet on 22nd Street. The "Fuller" contained 241,000 rentable square feet of floor space, typically housed twenty offices per floor, and was originally furnished with six Otis hydraulic passenger elevators. This skyscraper was equipped with its own steam and electric plants that provided heat and light to all office tenants. Woodwork was of mahogany and quarter-sawn oak. Each floor had only one restroom, men's and women's alternated floors. Early in its existence the twenty-first story housed a public observatory and the Flatiron Restaurant, both long gone.²⁰⁹

The "Fuller" Building had two entrances, one centered on Fifth Avenue and one centered on Broadway. The first floor was reserved for commercial and retail purposes while the floors above were targeted for office use; the Fuller Construction Company occupied one of the higher floors. In plan the skyscraper formed a right triangle (*not* an isosceles) with the right angle at the corner of Fifth Avenue and 22nd Street. External decoration covered all sides of the tower; there were no alley facades, no party walls, and no hidden un-

adorned facades. The "Fuller" was meant to be seen "in the round," and its Italian Renaissance detailing was indeed seen that way. White terra-cotta, a slightly yellow-hued limestone, and glass comprised the building's skin. The "Fuller" was topped not with a dome, or tower, or steeple, but with a simple and unassuming flat roof. A stone balustrade encircled the tower's top edge.

The Fuller Construction Company paid for the site, razed the unwanted structures, hired the architect, procured materials, managed all construction, paid the architects, paid all permits and taxes, took occupancy of the building, and outright owned everything lock, stock, and barrel. Still, something was amiss. New Yorkers, the architectural press, the popular press, and local pundits and wags insisted the "Fuller" Building resembled an iron, a *three-sided flatiron* – the household utensil used to iron clothes, one of those things used to make shirt collars crisp! A flatiron, 1902 version! Acting on their better judgment, the Company formally re-named *their* skyscraper the Flatiron Building, acknowledging a *fate accompli*, and in so doing, gained for their skyscraper more notoriety than ever.

At completion, architecture critics gave the Flatiron Building mixed reviews. Not so the public. But, despite some consternation, the Flatiron was one of *the* architectural sensations of the decade. It was a glamorous building because the public thought it so, not because of any critics' opinion.

The following appeared in a popular architecture magazine:

His building (Burnham's) is at present quite the most notorious thing in New York, and attracts more attention than all other buildings now going up put together."

The article continues:

'He who builds by the wayside,' says the proverb, 'has many judges.' And certainly nobody else is building so obviously "by the wayside" as the author of the structure of which the public has thus far refused to accept the official title of "Fuller," preferring the homelier and more graphic designation of the "Flatiron."²¹⁰



(165) Flatiron downdrafts caused skirts and blood pressures to rise.

The Flatiron Building was triangular for a reason – its site. How tragic it would have been if a square or rectangular-based building were shoehorned onto the site. Here Burnham's tour-de-force was a perfectly logical urban response that conformed to the three sidewalk edges, and furthermore, paid tribute to the green lawn across the street, Madison Square. The Flatiron was an inspiration to photographers and to painters and was viewed as romantic to poets and almost everyone else. Its moody shaft, especially on foggy or drizzly days, prodded noted photographers Edward Steichen and Alfred Stieglitz to capture the melancholy skyscraper. On most other days the Flatiron captured the wind and drove gusts to the sidewalks below. Hats would take flight and women's dresses would lift high enough to be noticed by knots of men gathered at strategic locations along 23rd Street. Cops on the beat would scatter the gawkers with the phrase "23 Skidoo" meaning that they should keep moving and don't block the sidewalks on 23rd Street.

The Flatiron Building's shape, its height, the Square, the traffic and the wind, have all contributed to this building's mystique. Tenant-wise, the Flatiron has been the favorite of small businesses particularly specialty publishers, opticians, jewelers, and garment purveyors. It stands today in a splendid isolation as it did when completed.²¹¹ Still, this early skyscraper remains, even after a century, one of the favorites of New Yorkers and visitors alike.

Land Title Building

Philadelphia

D. H. Burnham & Co., Chicago

1902

Chartered as the Real Estate Title Insurance Company in 1876, then later known as the Land Title Bank and Trust Company, this financial firm was billed as the world's oldest title insurance company. Its two-building-complex, connected at the first floor, was constructed in two phases. The first office tower, built 1898, stands via a steel frame and is wrapped with glass and red brick. It rises fifteen floors.

Philadelphia's second Land Title Building (1902) is a turn-of-the-century skyscraper of the first caliber; it is neoclassical, stone-clad, impressive, and tall-twenty-two floors, 331 feet above the sidewalk. Moreover, the Land Title Building is pure Burnham & Co. Here all of Burnham's characteristic design devices are employed. The office building's main entrance is marked by four giant Ionic columns. Rows of Tuscan pilasters and engaged Corinthian columns, at floors nineteen through twenty-one, help celebrate the language of neoclassicism. Strong horizontal demarcations in the form of belt courses ring the building, and they define its base, shaft, capital, and transitional registers. Pale granite and white-faced brick compose its walls and succeed in this abstraction of a classical column as no other materials can.

The following anecdotal information about the Land Title Building was provided by skyscraper builder, Paul Starrett:

My next field job for Burnham-and my last-set forth and emphasized the interrelation of builder and designer in certain ways that I had not before appreciated. The building was for the Land Title and Trust Company in Philadelphia. There had been an architectural competition for the design; Burnham was judge. Burnham had condemned all the sketches as unsatisfactory. Thereupon, the bank director insisted that Burnham design the building himself. He did so reluctantly, anticipat-

ing what happened—a clamor of protest from the competing architects and the American Institute of Architects.²¹²

Tribune Building

Chicago

Holabird & Roche, Chicago

1902

This office building once stood on the southeast corner of Dearborn and Madison Streets in Chicago's Loop. It rose seventeen floors, 244 feet high, and was the home of the Chicago Tribune, a Chicago daily, prior to its move to the world famous Tribune Tower. The "1902" building was reported to have been the first in Chicago with two basements. Both were required because of the paper's heavy and noisy printing machines.

Powers Building

Chicago

Holabird & Roche, Chicago

1903

Constructed as the Powers Building, this clean-lined office tower was also known as the Champlain—but later.²¹³ Famous for its prominent use of the "Chicago window" and its grid-like facades, the design also pays homage to the tripartite organizational principle. The Powers Building is a masterpiece of the Chicago school, bold, modern, and altogether one of Holabird & Roche's best efforts. Still present at the northeast corner of Monroe and Wabash Streets, this lesson in modern architecture rises thirteen floors, 160 feet.

Farmers Bank Building

Pittsburgh

Alden & Harlow, Pittsburgh

1903

Towering over Pittsburgh since its official opening on December 7th, 1903, the Farmers Bank Building stands twenty-four floors, 322 feet tall. The steel-framed structure is wrapped with stone, brick, and terra-cotta, and its color lightens as it rises upward. The facades seem confused, as at it appears that four very different buildings were stacked to form this skyscraper. What might be interpreted as successive additions to an already completed work is actually the building in total. Nonetheless, this structure highlights the struggle that some turn-of-the-century architects had with this new building type—the skyscraper.

Upon completion the Farmer's Bank Building was billed as Pittsburgh's tallest, a coveted title indeed especially in a city of industrial superlatives. The building originally housed 3,500 people each working day. Its ten elevators carried from 14,000 to 18,000 people daily. In its sub-basement, twenty-eight feet below the sidewalk, is the engine room that originally housed a 1,000 horsepower boiler and ten electrical pump engines. There also was a complete ice making plant for cooling the building's drinking water and an electric generating plant with a capacity of 11,000-16 candlepower lamps.

What was considered the latest in architectural and engineering technology is what was called for by the architects Alden & Harlow for the great Farmers Bank Building. Frank E.

Alden (1859-1908) was a member of Longfellow, Alden & Harlow, a Boston architectural firm organized in 1885. In 1892, Alden joined Harlow, already in Pittsburgh, to form a partnership there. Alfred B. Harlow (1857-1927) was born in Middleborough, Massachusetts. His education included 3-years at "Boston Tech," and training in the offices of Cabot & Chandler, and McKim, Mead & White in New York City. It can be said that Pittsburgh's Farmers Bank Building was Alden & Harlow's greatest architectural achievement.

Ingalls Building

Cincinnati

Elzner and Anderson, Cincinnati

1903

Built by railroad tycoon, lawyer, and banker Melville Ezra Ingalls (1842-1914), this is the first skyscraper constructed not with a skeleton of steel, but with a skeleton fashioned of reinforced concrete.²¹⁴ In 1870, Ingalls began his career as a railroad executive, becoming president of the Indianapolis, Cincinnati & Lafayette Railroad. He was also president of the Kentucky Central Railroad from 1881 to 1883 and president of the Chesapeake & Ohio Railway Company from 1888 to 1900. This office tower was the focus of Ingalls' business empire.

The construction of the Ingalls Building began in the fall of 1902, and its footprint was to fill a parcel of land measuring fifty by 100 feet. With this project, architects Elzner and Anderson pioneered a method of construction whereby all columns, girders, and beams began as wet concrete that was poured into molds laced with metal bars. Forming the inner structure, this concrete skeleton, with eight-inch walls, rose at the rate of one floor slab every four days. Upon completion, it topped out at sixteen floors, 210 feet tall.

The concrete skeleton of the Ingalls Building is wrapped with a curtain wall of unpolished white Vermont marble on floors one through three, glazed buff-colored brick for the next twelve floors, and glazed white terra-cotta for the top story and cornice. These materials are attached to the inner concrete structure via metal clasps, hooks, and anchors. Architecturally, the office building is a simply executed American commercial design with faint neoclassical borrowings.

The celebrated architects for the Ingalls were Alfred O. Elzner (1845-1935) and George M. Anderson (1869-1916), both from Cincinnati. Elzner's education was attained at the Massachusetts Institute of Technology and under the guidance of Henry Hobson Richardson. He returned to Cincinnati in 1887 and formed a partnership with Anderson. George M. Anderson studied architecture at Columbia University and at the Ecole des Beaux Arts in Paris. The partnership of Elzner and Anderson ended only upon the death of Anderson.

*...the Roman temple was a part of Roman life – not American life; that it beat with the Roman pulse, was in touch with Roman activities; and that it waned with Roman glory – it died a Roman death. The Roman temple can no more exist in fact on Monroe Street, Chicago, U.S.A., than can Roman civilization exist there. Such a structure must of necessity be a simulacrum, a ghost.*²¹⁵

Citizens Bank Building

Cleveland

Hubbell & Benes, Cleveland

1903

Still standing on lower Euclid Avenue is this once-striking skyscraper.²¹⁶ Here is perhaps the ultimate hybrid high-rise, a tall building that incorporates the Greek temple and the skyscraper in one astonishing composition. Greek or Roman, here is the ancient world once again reincarnated.

The Citizens Savings and Trust Company, established in 1868, constructed this fourteen-story skyscraper. Their home office building was a symmetrical U configuration, from the third floor up. No office was more than ten feet from natural sunlight and an operable window for fresh air. Its steel skeleton, electric elevators, and streamlined facades bear witness to its desire for modernity. Its entrance pavilion says otherwise.

The architectural firm of Hubbell & Benes, founded in 1897, managed to blatantly "Greek-ify" what otherwise might have been a strong, but modern, architectural statement. A full Doric temple front announces the building's main entrance; there can be no mistake where the door is. A faithful stone rendition of the Acropolis' Parthenon here simply echoed the architecture – and temple fronts - of lower Manhattan and Chicago's La Salle Street. At the time of the Citizens' completion federal reserve banks, commercial and private banks, and exchanges routinely sported temple fronts. Cleveland was not to be different and the Citizens Bank was completed in lockstep.

Architects chosen by the bank were W. Dominick Benes (1857-1935) and Jamin S. Hubbell.²¹⁷ These formed a partnership in 1897 that lasted until Benes' death.²¹⁸ They collaborated on a design for Citizens Bank that brought them neither fame nor fortune. The Citizens Bank Building was seen by most, then, as a proper and dignified structure. The Chicago School did not.

A change in building ownership deemed a remodeling necessary in 1924. The Bank's showcase lobby, two stories tall, was converted into stacked office space. The Doric columns, indeed the entire temple front, was erased and replaced with an exercise in design banality.²¹⁹ What was once a noble, albeit somewhat controversial structure, has since become another "background" building.

Rockefeller Building

Cleveland

Knox and Elliott, Cleveland

1903

Cleveland's Rockefeller Building is perhaps one of the finest, most forward-looking, skyscrapers of its age. Located in the heart of the city, this architectural masterpiece still proclaims its modernity through its clean and simple lines, lack of overt decoration, flat

top, and its overall prismatic shape that renders all else secondary. Large panes of glass figure prominently in the building's facades and these are separated from one another by a clearly defined system of primary, secondary, and tertiary piers and simple brick spandrels. At the Rockefeller's summit is an outstanding example of a modern cornice, a splayed element with a gentle outward sweep recalling that of Chicago's Monadnock Building (Burnham & Root, 1891). The cast-iron-clad walls, piers, and spandrels of its three lower floors are superbly decorated by low relief foliate designs that can only be classified as Sullivanesque.



(166) Rockefeller Building

Interior spaces on floors one through three are served by broad expanses of glass and define these areas as commercial or retail. Upper floors house offices, and here the building's facades are marked by repetitive rows and ranks of identical windows, and, although large by most standards, they are all sized to an office environment.

The Rockefeller Building measures some 200 by 150 feet along its street frontages, and it forms a U in plan. It rises sixteen stories, has hundreds of offices, and, when built, this skyscraper's tab totaled just over \$1 million. Its construction was sponsored by one-time Clevelander and American industrialist John D. Rockefeller, Sr. (1839-1937) as a business venture.

Railway Exchange Building

Chicago

D.H. Burnham & Company, Chicago

1904

Still standing, the Railway Exchange Building has become over the years a beloved Chicago landmark and a fine example of the employment of neo-Renaissance ornamentation. Constructed as an office building devoted to the headquarters of multiple railroad concerns it was, and still is, the home to tenants in all facets of business. This skyscraper stands seventeen floors, 220 feet tall, and is served by ten passenger elevators. Base dimensions measure 171 by 172 feet, with a large light well puncturing the structure's core. The Railway Exchange Building reveals no internal structure, but instead, conceals it behind tons of white, glazed, terra-cotta (37,730 square feet on the Michigan and Jackson street facades alone).

As an advertisement it is believed that the Times Building has been worth every cent it cost, and more....²²⁰

New York Times Building

New York City

Cyrus L. W. Eidlitz, New York City

Andrew C. MacKenzie, New York City

1904



(167) New York Times Building

It majestically oversaw the confluence of Broadway, Seventh Avenue, and Forty-second through Forty-seventh streets—the Crossroads of the World! And it presided over the stream of humanity and their rush, and their crush, and their push—and the years.

It was modeled after a Florentine bell tower, but it was American – every bit of it.

It is gone now. It was regal, and it stood twenty-five floors, 363 feet proud, and it was the second tallest in the city—once! It left the site of tangled streets and a Square, named in its honor, in 1965. And it had a ghastly demise.

The New York Times Building was an icon. It was so much more than simply another office building, a tall place where hundreds came to work. This was the pride of perhaps the greatest newspaper in the world; this was its home - on Broadway, a shrine where "All the News That's Fit to Print" was printed. It was here, that in 1904, a newspaper chose to locate. It was here, then, the New York City Board of Aldermen forever changed Longacre Square to Times Square because, they said, the newspaper "was doing so much to develop the neighborhood and [it was] contributing an architectural monument to the city." And so it was.

The paper was founded in 1851. It constructed its first home on Printing House Square in 1858, and another in 1889. This, the Times Block (George B. Post), was located at Forty-one Park Row and was a substantial stone building. It was from here that the newspaper, and all the presses, paper, ink bottles, desks, fountain pens, and more, would be lugged uptown. The paper reasoned that the Broadway and Seventh Avenue intersection would be, if it was not already, the pivotal center of Manhattan and the hub of its transportation systems. Proximity to this put the daily newspaper right into the thick of things – a decidedly urban and totally apropos response, especially so for a metropolitan newspaper.

As Broadway slices through Manhattan "squares" are formed at the junctions of each avenue, hence Madison Square, Herald Square, and so on. Where Broadway meets Seventh Avenue a strangely shaped piece is formed. It was on this parcel that the New York Times decided, again, to set down roots. It was also here that the nine-story Pabst Hotel stood. This Parisian delight, sponsored by the Milwaukee brewer, was cornered by inconsequential two-story business. All were slated for demolition. The Pabst, still an adolescent, had elevators and a metal skeleton. It is believed that the Pabst Hotel holds the dubious distinction of being *the first skyscraper* ever demolished. The hotel's demolition was of no consequence to the New York Times. A design was decided upon, engineering problems were resolved, and history was yet to be made.

As a point of departure, a copying of sorts, the architects chose a building of some celebrity, the Campanile of Florence Cathedral,²²¹ an Italian Gothic masterpiece. The still extant original is forty-five feet square and 275 feet high – a substantial structure indeed. Eidlitz and MacKenzie chose to cap-off the Times' traditional-looking base with a tower that recalled a landmark in Florence, and they did an admiral job.

The cornerstone of the New York Times Building was laid on January 19th, 1904. Still, vast problems remained what with building above a major subway station with multiple lines, the scheduling and storing of material on so small a site, the city's usual traffic congestion there, sewer and water main convergence below, and any number of concerns that within an instant could become tragic. Budgets were tight, as always, but with

this project time constraints were primary. Contractors were told that once newspaper production ceased at the old location, newspaper production *must commence* at the new location – there must be *no interruption* of news service to the city. And there was none.

On January 2nd, 1905, the first New York Times rolled off the presses at the *Times Square* headquarters. In less than a year a twenty-five-story skyscraper was erected against some of the toughest odds ever faced by architects and contractors. The building's construction time was nothing less than a miracle. At completion it stood clothed with an off-white limestone, cream-colored brick, and white terra cotta. Exterior walls dripped with Italian Renaissance and occasional neo-Gothic decoration.

This stone coat shielded from the pedestrian all forms of wind bracing that were required for such a tall, yet relatively thin, structure. The building had the required wind bracing to make the tower rigid and able to withstand a steady wind pressure from one direction of thirty pounds per square foot of area of the side exposed. This was claimed to be "far beyond the pushing force of a tornado."

Though mistakenly thought to be triangular in plan, like the Flatiron Building, the New York Times' was not; it formed a trapezoid with the north and south walls parallel. Wall lengths were as follows: south fifty-eight feet, north twenty feet, east 143 feet, and west at 138 feet. Within these confines resided public lobbies, elevator banks, editorial rooms, counting rooms, advertising departments, composing rooms, press rooms, and hundreds of offices for editors, writers, reporters, secretaries, typists and those of many more occupations.

Below grade, three basements stuffed with giant printing presses, boilers, coal bins, an electrical power plant, and piping vied for space with the giant and hectic Forty-second Street subway station. There were broad concourses that lead directly to and from the Times Building. Ornate subway entrances, fronting on the Times' Broadway side, also lead to the great caverns below where two hundred thousand ventured each day.

Leaving the din below one could escape to a public observatory on the roof. Here was featured a round room, humble in size, which rested in the middle of the tower's roof. Guests had to venture outside – to brave the elements – and search out a place at the railings fastened to the roof's edge. From up here one could positively drink-in the city with no obstruction, not even glass. At moments one's only companions were the gargoyles that lunged outward from the observatory's walls.

It was here, from this building, that New Year's Eve partying on a grand scale was invented. From the New York Times Building on December 31st, 1904, a spectacular fireworks display enthralled tens-of-thousands of shivering New Yorkers. This nighttime pyrotechnics was intended as a celebration to mark the completion of Times' new headquarters. Since then, a similar celebration is observed but with a giant mirrored and lighted ball that slides down the building's flagpole at the strike of twelve. Still, the throng gathers on that magical night with its hopes and dreams as Ben Grauer no doubt still peers from above.

New York City's Times Building was special. It occupied a powerfully important location in a powerfully important city. It was an architectural dichotomy, an optimistic building whose innards were modern, yet it wore the clothes of the Florentine Renaissance. Its reason d'être was self-promotion. From almost the moment of its completion its crown

blared electrically – furnace white - with "Times" in four directions. Then, in 1928, in what can only be termed a promotional masterstroke, the Times wrapped its beloved tower with the *Motogram*. The *Motogram*, a five-foot-tall, 360-foot-long band of 14,800 lights, girded the building's base and continuously flashed news and messages – courtesy, of course, of the New York Times. Pedestrians were enamored with this, the world's first "moving" sign. This pulsating "belt of light" remains still, a romantic vestige of the Roaring Twenties.

On February 2nd, 1913, the New York Times moved to a new location only two blocks away from their famous tower. This came after only eight years of occupying their namesake building and after continual complaints that the structure was not large enough. The Times Annex (Mortimer J. Fox, 1913), was constructed to alleviate the paper's space problems and to more successfully anticipate the requirements of the future. After the move, the Times organization still held title to the building until 1961 when it was sold to other business interests, who, in turn, sold the landmark skyscraper to the Allied Chemical Corporation in spring, 1962.

Every New Yorker knew of the New York Times Building – it was *their* landmark. But, by 1965, the New York Times Building ceased to exist by means of an ignominious end. Allied Chemical's office headquarters simply could not be housed in an "old" building, so the company reasoned, and they decided to give themselves a real "sixty's" home. They hired the New York City architecture firm of Smith, Smith, Haines, Lunberg & Waehler, the successor firm to Eidlitz's, no less. With Allied's blessing, the architects and contractors proceeded to remove the entire stone exterior, down to the steel framework, and resheath the building in brown-tinted glass and white marble. It stopped "being" the Times Building *then*, and became nothing more than an architectural travesty. It was positively ghastly, and no New Yorkers liked it. *Their* landmark disappeared forever.

During the mid-1990s, long after Allied Chemical too vacated, the old tower was again vastly altered. As a result, only commercial and retail establishments currently occupy its lower floors. All upper floors are devoted to supporting dozens of giant and colorful electric signs and digitized screens. A visit to Times Square finds its rudimentary structure intact, but its profile blurred. And though a century old, the Times Building continues to give its regards to Broadway.

An offering of *original* Times Building statistics:

- twenty-five floors, 363 feet tall
- ranked second tallest when completed (then tallest: Park Row, 29 floors, 382 feet)
- weight of building (dead load): 38,981 tons
- three basements
- one fire staircase served all floors
- steel weighed 3,712 tons
- 645 windows, seven revolving doors at street level
- four electric Otis passenger elevators served to 16th floor, two of which continued to also serve up to 25th floor
- electric plant in basement supplied power
- twenty-one miles of electric conduit
- 2,441 electric outlets
- 6,203 incandescent lamps, with potential for 8,572
- two giant boilers in basement

- internal smoke stack 389 feet tall, 3 ½' x 5', served boilers
- 542 radiators
- every floor, up to the fourteenth, had an inlet (mail chute)
- internal electric vacuum cleaning system
- typically twelve offices per floor
- every floor served by a "men's" room (three toilets, two urinals, one lavatory)
- only certain floors provided a "woman's" room

Chicago Building

Chicago

Holabird & Roche, Chicago

1904

Constructed as the general offices for the Chicago Savings Bank and Trust Company, this building stood, and remains, squarely in the center of the State Street shopping corridor, the turn-of-the-century retail nexus of Chicago. Its location and stature were strategic as its height rendered it visible for a half-mile in both directions along mighty State Street: Its fifteen floors, 196 feet, marked the location to shoppers that it was here where business could be conducted for "retail purposes."



(168) The Chicago Building is the epitome of the Chicago School. Photo by author.

This skyscraper represents a fully-developed and largely intact example of Chicago School construction. Both street facades, composed of reddish-brown brick and terra-cotta, are also celebrations of the Chicago window and feature both flat and bay variations. In all, the building's street walls are far glassier than solid, a characteristic of the mature Chicago School. Unbroken piers, connecting the third and fifteenth floors, convey free vertical movement.

Ansonia Hotel and Apartments

New York City

Graves & Duboy, New York City

1904

Broadway during the first decade of the twentieth century was being embellished with some of the most phenomenal architecture, tall architecture - skyscraper architecture. Along just this one thoroughfare one could witness the greatness of the nation, the power of its institutions, and the wealth of its entrepreneurs. The procession marched northward from the great Produce Exchange, Standard Oil, Haughwout, and Flatiron to the Upper West Side. It seemed that one could soak-in the whole art of architecture just by strolling along one street, a street like no other. And in 1904 that procession did stop, it halted abruptly at Seventy-Third Street with the completion of the Ansonia Hotel and Apartments.

The Ansonia still stands and is one of the most loved and admired buildings in New York City. This Parisian-inspired hotel and apartment building was constructed as a deluxe residence by wealthy real estate developer William Earl Dodge Stokes. The Ansonia was under construction from 1899 till 1904, a full five years, and originally featured over 300 suites. Street frontages measure 239 by 214 feet, a large footprint for the Broadway of 1904. Its exterior walls are slathered with terra-cotta, limestone and brick. Light courts mingle with residential blocks as shadows dart across its facades betraying the building's solids and voids. Its energized elevations seem to vie for attention with the convex, and turreted, mansard roof above.

At its completion the Ansonia, complete with a delightful roof garden, was considered the largest and most elaborate apartment hotel in the world. It was tall, even by New York standards: eighteen floors (with attic), 180 feet. An advertising card distributed shortly after the building's completion reads:

Ansonia Hotel

When Contemplating a Trip to New York Arrange to Stop at the Ansonia
Convenient To Everything in Town

In the Finest Section, With Magnificent Views of Rivers, Harbor and Tall Buildings.

17 Stories 2500 Rooms

Housekeeping Non-Housekeeping

Fireproof in Every Sense of the Word

Kitchen Exceptional

Single Rooms \$2, Room and Bath \$3

Parlor, Bedroom and Bath \$4 and upwards

Express Subway Station

Bellevue-Stratford Hotel

Philadelphia

William and George Hewitt, Philadelphia

1904

The Bellevue-Stratford is the most celebrated hotel in Philadelphia. As one of America's great cosmopolitan hotels this century-old building hosted noted guests from the worlds of politics, business and finance, entertainment and the arts. It is a building of architectural distinction, a seventeen-story landmark in downtown Philadelphia.

Completed in September 1904, its design draws from the French Renaissance, then a common architectural source of inspiration. The hotel's facades are highly animated and are especially active when sunlight ripples across the miles of terra-cotta that wrap the skyscraper. These surfaces are lush, alive with protrusions and recessions and are in sharp contrast to the sleek surfaces of nearby towers. A substantial mansard roof tops the building and is peppered with dozens of windows and crowned with elaborate iron cresting. Adding, in 1913, to the Hotel's grace, charm and pomp, was a roof garden, a destination that quickly became Philadelphia's social center. The four-hundred guest room hotel was reported to be "the first important hotel to have modern conveniences."

Those responsible for the design of this building were the brothers William D. Hewitt (1848-1924), and George Watson Hewitt (1841-1916). George was a native Philadelphian and established an early partnership with Frank Furness and John Fraser. William was New Jersey-born and studied architecture at Philadelphia's Polytechnic Institute. The brothers formed a partnership in 1877 and it ended when George retired from architectural practice in 1902.

Republic Building

Chicago

Holabird & Roche, Chicago

1905

The Republic Building, a Chicago school treasure, was demolished in 1961. That act was considered by respected architectural historian, Carl Condit, to be "a major civic loss."²²² His assessment was accurate. This Loop office building was an excellent example of a mature design produced by a mature firm. Its design was straightforward, clean and crisp. Some eighty-percent of its street walls were glass with remaining details simple and geometric. This skyscraper's glazed white terra-cotta piers and spandrels, belying its all-steel frame, embraced 240 offices within.

This noteworthy skyscraper stood on the southeast corner of State and Adams Streets, the heart of Chicago's great shopping corridor. Consequently, retail played a major role in its tenant roster and it was "...recognized throughout the middle west as the first building to specialize in retail shops above the first floor." The accompanying view shows the Republic at its completion; in 1909 seven floors were added to its original twelve bringing its total height to 260 feet. With the extra height an incongruous Greek-inspired cornice was affixed to its top diluting its earlier, uncompromising, and modern beauty.

Majestic Theater Building

Chicago

Edmund R. Krause, Chicago

1905

The Majestic Theater Building is a fine example of a turn-of-the-century mixed-use development for an urban central business district. The components are these: a twenty-story, 240-foot-tall office building, retail stores, and an entertainment venue in the form of a large vaudeville theater, originally the *Majestic*, now the *Shubert*. The Majestic Theater was opened on New Year's Day in 1906, and after years of success suffered the indignities of the Depression closing for some thirteen years. In 1945 it reopened as major venue for the Shubert Organization of New York. The whole of the project was wrapped

with Renaissance ornamentation executed in white terra-cotta and was offered to tenants, theatergoers, and the public as a singular location to consult with your lawyer, see a play, and buy a suit.

The First National Bank Building (1896) [sic] is a typical product of the transition from the commercial to the classical style. Except for the generous window area of its central portion and the structural and functional characteristics, this building makes us feel that the Chicago school existed in vain. Indeed, by the time the First National Bank was constructed many clients had come to believe that the school had been a passing phase, an old-fashioned thing with no place in the new gilded age.²²³

First National Bank Building

Chicago

D.H. Burnham & Company, Chicago

1905

The First National Bank was founded on July 1, 1863. It survived the Civil War and the Great Chicago Fire, and in 1882 the Bank completed its headquarters building on the northwest corner of Dearborn and Monroe Streets in downtown Chicago. This was a substantial structure, an early and prominent office building that stood six floors, housed 100 business offices, and featured three passenger elevators; Inside could be found "corporations, attorneys, leading real-estate operators, promoters, and financial men generally." The building rose 100 feet high and it measured 192 feet north-to-south by ninety-six feet east-to-west. This structure, designed by Burling & Whitehouse of Chicago, was indeed a business block of prominence and was well noted throughout the Midwest. Also completed in 1882, and immediately to the west of the First National Bank, was the legendary Montauk Block, an early ten-story skyscraper the work of Burnham & Root. These two structures would ultimately be viewed as components of one very large parcel of land, an expansion site for the Bank; Both would come down in 1902.

The replacement structure, the new headquarters of the First National Bank, was simply touted as one of the grandest structures in the city. The Bank constructed a typical Burnhamesque skyscraper, a Renaissance palazzo of colossal proportions. It was massive, a half-block structure whose footprint stretched 231 by 191 feet. It stood seventeen stories, 257 feet over the street, and boasted 1½ miles of corridors "upon which open about 1,000 doors." It was estimated that during business hours the building contained between 5,000 and 6,000 people.

The building's construction "consumed not only tons of sumptuous varicolored stone from Europe and Africa, but 150 railroad cars of pure white Vermont marble as well." The skyscraper's interior was generously executed in various marbles and mahogany throughout while exterior walls were faced with cut stone.

After standing only sixty years the lavish 1905-headquarters building was deemed obsolete and its demolition was slated. It, in turn, would be replaced by something larger and more prestigious. By 1969, and standing more than three times the height of its predecessor, rose One First National Plaza, a sixty-story, 850-foot-tall skyscraper that still dominates the Loop.²²⁴

Fleming Building

Des Moines

D. H. Burnham and Company, Chicago

1907

Some Beaux-Arts detailing is included on this otherwise straightforward design of elegant simplicity, the simplicity of the Midwest, the simplicity of the plains and of the prairies that define Iowa. Des Moines' Fleming Building was Iowa's very first steel frame skyscraper. It rose eleven floors, 132 feet, and with the Observatory Building, commanded the skyline of Des Moines. Its statistical profile includes much with regards to the Fleming's steel frame; engineering drawings amounted to 278 sheets and 23,876 pieces of steel, with 194,000 rivets, went into its construction.

The Fleming Building's architectural style is a very restrained variation of Beaux-Arts classicism. Its facades are divided into three clearly defined vertical sections: a base with two story-tall pilasters and an arched entrance, a mid-section of eight repetitive floors, and a top section featuring a stone-clad eleventh floor and an unbroken cornice.

Corn Exchange National Bank Building

Chicago

Shepley, Rutan & Coolidge, Boston

1908

On the southwest corner of LaSalle and Adams Streets once stood this prim, proper, and rather smallish skyscraper, the Corn Exchange National Bank Building. Executed in the Florentine Renaissance style, this was the handiwork of one of Boston's more famous, and certainly prolific, architectural firms, that of Shepley, Rutan & Coolidge. Arcades outside, colonnades inside - together these describe well ordered spaces, handsome proportions and the architects' loyalty to the fifteenth century.

The seventeen-story Corn Exchange National Bank Building was demolished in 1912. The story of the Bank is noteworthy by its rapidly perceived obsolescence and its size: it simply was not big enough to remain standing, and the real estate sector knew it. The Corn Exchange Bank stood for a scant four years, an astonishingly short amount of time. By size contrast, its replacement occupied half the block and caused the demolition of at least three other substantial business structures. The Continental & Commercial Bank Building, designed by Graham, Burnham & Company, was the culprit. It rose twenty floors – only three more than its predecessor – but its bulk more than made up for its height. Completed in 1914, the \$4.5 million monument stood 260 feet high and housed considerably more tenants than the Corn Exchange. Of course, it also generated substantially more tax revenue to the city of Chicago. Still standing, this neo-classical building is now known by its address, 208 South LaSalle Street.

Hudson Terminal Buildings

New York City

Clinton & Russell, New York City

1908

The Hudson Terminal Buildings must be viewed as a complex, an organized development consisting of much more than just two office skyscrapers. It was the locus of a

massive transportation network that served its own office, commercial, and retail components, as well as much of lower Manhattan. Here was planning on an urban scale, a giant project by even today's standards; in 1908 this was no doubt considered colossal. With the Hudson Terminal Buildings one sees for the first time, anywhere, *twin skyscrapers* – these towers pre-dated New York's World Trade Center by sixty-five years! Here was an ambitious undertaking unlike anything that went before and its completion was nothing less than an architectural and engineering miracle.

The Hudson & Manhattan Railroad Company erected this complex as an investment and as its signature development. At completion the total cost was announced to be \$12 million, in 1908 a princely sum indeed. The subterranean train station with connections to Newark and beyond serviced hundreds of trains per day. It was directly connected to Manhattan's subway system via multiple stations, platforms, tunnels, concourses, and arcades. At its completion, its closest neighbors were the Singer, City Investing, Havermeyer, Mail & Express, and Western Union Buildings.

Each office building rose twenty-two stories, 275 feet. These stood on Manhattan's lower West Side, on two adjacent blocks fronting on Church Street, between Fulton and Cortlandt Streets. Narrow Dey Street separated the towers and was transversed with a pedestrian bridge high above and by tunnels below. Cladding materials used were red brick, granite and limestone. Each building was H-shaped in plan and each rose without setbacks. It was promoted that these together formed the world's largest "office building," they weighed a whopping 200,000 tons and they rested upon a cofferdam 400 x 178 feet, seventy to ninety-eight feet deep. In all, these two skyscrapers housed some 20,000-office workers.

The Otis Elevator Company supplied thirty-nine electric passenger elevators to the towers and boasted that "the Hudson Terminal is equipped with the largest elevator plant ever installed at one time in a single building."²²⁵

The Hudson Terminal Buildings were to be demolished in 1967 for another planned office and transportation complex referred to as the New York World Trade Center.²²⁶ By 1969 the turn-of-the-century complex was erased from its site, a location now occupied by the very heart of the World Trade Center and *its* twin 110-story office towers.



(169) Hudson Terminal Buildings



(170) City Investing Building

City Investing Building

New York City

Francis Hatch Kimball, New York City

1908

If ever there was a skyscraper that evoked romance, historicism, capitalism, and the optimism of the early twentieth century the City Investing Building was it. Here was a tower that drew upon inspiration from French Baroque sources, and in so doing, cut a delightful profile on New York's skyline. The building stood thirty-four stories, 487 feet, and contained one-half million square feet of floor space making it the world's largest office building. It represented the belief in unbridled economic growth and its thirteen acres of floor space were some of the most sought after anywhere. It was, above all, an important skyscraper whose likes had not been seen before, nor since.

Located at One-Sixty-Five Broadway the City Investing Building shared major portions of the downtown block bounded by Broadway, Trinity Place, Cortlandt and Liberty Streets, with the Singer Building.²²⁷ In order to erect the City Investing, the eight-story Coal and Iron Exchange was demolished.²²⁸

The City Investing Company, a diversified financial firm, shared a major portion of its tower with dozens of other enterprises. In all, the City Investing Building accommodated over 6,000 tenants. At its completion, after twenty-two months of construction, the City Investing Building was valued at \$10 million, and it stood as one of New York's highest skyscrapers. Exterior materials included white-glazed brick, 3,000 tons of white terracotta, and limestone - used principally for its three-story base.

On an irregularly shaped parcel of 27,000 square feet, the great building rose. It measured ninety-four feet on Broadway, 105 feet on Church Street, and 315 feet on Cortlandt Street. The distance around its outer walls was 1,067 feet. The City Investing Building was a very efficient rental property, and the real estate market helped to dictate its form. The huge amount of office space (required to make this building economically feasible, and the demands that thousands of tenants made per day with regard to transportation, natural light, and fresh air) made the City Investing Building somewhat unique. The building had an L-shaped base, above which were three office slabs, or wings. The F-shaped mid-section was surmounted by twin-towered office blocks, topped by steeply pitched gable roofs. Its parti can be described as a series of slab skyscrapers joined at right angles to each other and to two tower forms.

Building amenities included twenty-one electric passenger elevators, for vertical transportation, and for lateral transportation there were direct connections to the elevated trains that once plied Trinity Place, and the subways that rumbled beneath lower Broadway. By locating on busy Broadway, tenants were afforded immediate access to trolleys, buses, cabs, and automobiles. The City Investing Building's lobby stretched between Broadway and Trinity Place with additional entrances on Cortlandt Street. This interior "sidewalk" was one of the finest and most elaborate in New York. Public areas included multiple elevator lobbies and distinguished retail spaces.

Henry Alexander Horwood, writing for the Metropolitan Magazine just before the City Investing Building opened, best describes these public areas:

Running from Broadway clear through to Church will be an arcade more beautiful than that of any office building in the world. It will be thirty-seven feet at the narrowest point, fifty-two at the widest, three hundred and fifteen feet long and the ceiling will be as high as the third floor of the building adjoining. It will be lined with marble and have booths here and there at the wider parts.²²⁹

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The City Investing Building did play an unusual role due to one of New York's most famous conflagrations. After the Equitable Building fire of January 9, 1912, the directors of the Equitable Life Assurance Company quickly decided that to remain in business, and at the very least serve their existing clients, the company had to immediately secure office space elsewhere. An urgent plea went out to the owners of the City Investing Building, which was located only two blocks away from Equitable's charred headquarters. City Investing owners were only too eager to accommodate. Within a matter of hours a contract was signed for three whole floors of the City Investing Building. These floors served as a makeshift home until Equitable's new home office building was completed in 1915.

During the years 1928 through 1932, the City Investing Building was known as the Benenson Building, then afterward, it was simply known by its address.

Upon its completion, the City Investing Building was thought by some to be an office tower of the first caliber, and others thought it to be a monstrosity. Some thought it to be eloquent, some thought it confused. Nevertheless, this building represented a great and noble attempt to come to terms with the complexities of a crowded urban site, to reconcile architectural style, beauty, height, transportation, economics, and engineering. It was a landmark skyscraper, and it stood for only 62 years.

In 1970, in one of the most tragic of architectural crimes, the City Investing and the Singer Buildings were demolished. The block was leveled for the giant One Liberty Plaza.²³⁰ This modern, steel box office tower is the architectural antithesis of its predecessors. And still, these buildings exist, or existed, in a continuum. In relatively quick succession, three generations of skyscrapers occupied this very same column of air, each eclipsing the previous tower in height, bulk, and technology.

Friend Ann, It is a case of rubber necking to see the top of this building. Rae²³¹

From sewing needle to "sky-needle," the Singer Building was the natural outgrowth of a company that gained almost universal domestic acceptance:

*Although the sewing machine is a comparatively modern invention, it has proven such an invaluable time and labor saver that it is found in nearly every home...With proper instruction in the use of the machine and its attachments and with a little practice, anyone can produce economically the many items of clothing and household equipment demanded by modern standards of living.*²³²

Singer Building

New York City

Ernest Flagg, New York City

1908

The Singer Building was America's most famous and recognizable building in 1908 and for decades after. It was the first building to rise more than 600 feet and it grabbed the public's attention as no skyscraper had ever done. The Singer Building was photographed and sketched so Singer's customers and the public could become acquainted with the Company's architectural achievement. Promotional materials were distributed by the millions. For perhaps the first time, an American corporation was inexorably tied to the building that housed its home office. The Singer Company marketed its skyscraper

like its sewing machines. This was more than a building, this was an icon to some, and with its completion, the Singer wrested the title of World's Tallest Building from Philadelphia's City Hall (1894) and it went on to become one of New York City's most beloved landmarks.

Isaac Merritt Singer (1811-1875), the company's founder, was born in Oswego, New York. After some traveling Singer came upon a mechanical sewing machine whereupon he felt that he could improve its design. In 1851, not only did he improve upon its design, Singer went on to form a company to produce sewing machines that incorporated his changes. By 1863, the Singer Manufacturing Company ranked as the world's largest sewing machine manufacturer. Curiously, Isaac Merritt Singer retired in 1863 and left America for England. Still a viable company, it was further credited with being the first to put an electric motor on a sewing machine (1889) and the first to spend a million dollars annually on advertising. Other accomplishments would soon follow.

A densely built block in lower Manhattan, bounded by Broadway, Liberty, Trinity and Cortlandt, appeared promising to real estate developers and large corporations during the end of the 1890's. Space was at a premium and firms needed to expand. Some demolition occurred, and with it emerged the possibility of more skyscraper development. In 1896, the Singer Company (the firm since erased "Manufacturing" from its name) called upon architect Ernest Flagg to design its new corporate offices for the northwest corner of Broadway and Liberty. Consequently, a ten-story building was completed in 1898. In 1899, Ernest Flagg designed the adjacent fourteen-story Bourne Building. An industrialist, Frederick G. Bourne, was the president of the Singer Company from 1889 to 1905. He served as chief executive during Singer's very profitable years (in 1905 one million sewing machines were sold) and he was no doubt instrumental in forming plans for the major construction task ahead.

Extensive internal alterations, including considerable structural changes, were required of the original 10-story Singer Building. Four floors were added as a plinth, a base, for the giant tower planned for above. Ernest Flagg, architect-in-charge, occupied offices in the nearby Mills Building (Post, 1883) so that he could keep close watch on the progress of his Beaux Arts extravaganza.

More than 100 contracts were individually let to firms committed to completing the great skyscraper. The announced "world's tallest" would rise from an already completed group of three office buildings, a complex measuring fifty-eight feet on Broadway and 110 feet on Liberty. On September 19th, 1906, construction began. The weight of the entire forty-seven story building was calculated at 90,000 tons. Excavation for the foundation began with the placing of caissons of solid concrete that rested on bedrock ninety-two feet below street level.

Erection of the Singer's steel frame commenced in late Spring 1907. Hundreds of steel-workers began placing into position no less than 850 columns, and 17,000 girders, beams, and diagonal braces. By October 4th, 1907, the Singer's thirty-three story steel-frame was completed. In a robust example of corporate boosterism an immense "Singer" flag was flown from the sixty-two-foot tall hollow steel flagpole positioned above the yet-to-finish skyscraper. The date was October 3rd, 1907, and the topping-out ceremony announced that *this building* was the tallest of them all! Yet, much work was unfinished and total completion was still seven months away.



(171) Singer Building, once the World's Tallest skyscraper.



(172) Some women wore gushy hats with plumes, bulbous like the tops of some Wall Street towers. Such was the aristocratic style.

The tower rose sheer, sixty-five feet square, and was positioned thirty feet back from Broadway. Wrapping the frame was red brick, limestone, polychrome terra cotta, copper, and glass. At the thirty-fifth floor a balcony, formed by the extension of the floor, bowed outward eight feet six inches on all sides. The balcony of cut limestone was one story in height. Above this a dome of more than eighty-five feet in height extended from the thirty-sixth to the forty-first floors, reaching 548 feet above the sidewalk. A huge rounded arch on each side of the dome surrounded three stories of windows. Flat dormers and skylights penetrated the upper portions of the dome. Singer's roof was covered with black slate trimmed with copper. The building's crowning bauble was a six-story, copper-trimmed glass lantern. This structure was in effect a steel cage clothed with heavily ornamented copper and glass. It held floors forty-two through forty-seven and measured sixty-four feet tall. The very top of the building was fitted with an ingenious trapdoor which opened outward to form a small platform, more than 600 feet above the sidewalk from which the Singer flag was raised and lowered.

The Singer Building was finished only twenty months after construction began. Great care was used so that the tower would rise straight and true. However, at completion it was rumored that the tower was only three-eighths of an inch out of plumb. Nonetheless, on May 1st, 1908, the forty-seven story, 612 foot-tall skyscraper was opened to the public, the press, the curious, the common man, and to the nation. America had a new record holder, one whose total cost was a scant \$1.5 million.

Inside the Singer Building were a host of superlatives. The main lobby was a large, double-height cavernous space defined by a forest of marble-clad piers. In a burst of artistic energy color, profuse detailing, glass-domes, escutcheons, garlands, pendant lamps, and white marble with heavy veining surrounded those who entered from Broadway. Sixteen electric elevators moved workers and visitors alike through the building. Four elevators served the tower with one traveling non-stop from lobby to public observatory in only one minute. The Singer Building boasted 412,820 square feet of floor space, the equivalent of nine and one-half acres or twenty-eight city blocks. Daily it would house 2,500 office workers. Singer's headquarters were located on floors thirty-seven through forty, the highest office floors available. The remainder of the building was leased to dozens of tenants.

The forty-first floor marked the observation platform, opened to the public on June 23rd, 1908. Its floor measured 548 feet above the sidewalk and was an immediate sensation. Here was, of course, the highest vantage point from which to view the metropolis. The platform was outside and could accommodate up to forty paying guests (fifty cents) at a time. Visibility was often over thirty miles. One of the first visitors, a woman, said of her experience that "...it was as good as going up in an airship."

The Singer Building was one of America's first skyscrapers to be artistically lighted at night. This tower was the ultimate corporate symbol, it was regal, showy, a premiere landmark of that age and there was no reason to keep this "icon" in the dark. Consequently, thirty projector searchlights and 1,600 incandescent lamps were focused upon the building's shaft and summit. The Singer was visible for forty miles.

In 1962, the Singer Company sold its venerable corporate tower and relocated its headquarters to Rockefeller Center. The building's new owner, the United States Steel Company, eyed the site for its regional headquarters and thus sealing the fate of the "friendly giant." In 1967, in an act of utter desecration and disbelief, the wrecking of the Singer commenced. In its place would emerge the U.S. Steel Building (now One Liberty Plaza).²³³ Consequently, the Singer Building holds the dubious distinction of being the tallest building to ever be demolished. What was thought to be Ernest Flagg's crowning architectural achievement fell in a matter of months to nothing more than rubble, memories, and long-forgotten postcard messages.

*How can men defy the building laws of generations and Winter [sic] storms and soar with their fabrics of steel, cement, and stone into the upper air, where only balloons had been before?*²³⁴

Metropolitan Life Tower

New York City

Napolean LeBrun & Sons, New York City

1909

"Where only balloons had been before" – is now the realm of skyscrapers. The Metropolitan's golden lantern was lifted higher than any other, and according to early reports, it rested in the clouds. The balloon, the "aero-plane" and the skyscraper were finally cousins of improbable altitude and awesome daring.

The Metropolitan Life Insurance Company was founded in New York City in 1863. In 1874, architect Napoleon LeBrun remodeled the old Constant Building at Park Place and Church Street for the insurance company's headquarters. By adding two floors, tucked inside of an imposing mansard roof, he brought the building's height to seven stories. This pioneer office building featured passenger elevators – a not-always-available amenity for "1874" office tenants. The company eventually outgrew this home prompting a search for newer and larger quarters; it was termed successful when in 1890 a parcel of land facing fashionable Madison Square was acquired.

The firm of Napoleon LeBrun & Sons, Metropolitan's "court architects," designed a giant office structure at One Madison Avenue. Its new headquarters, standing eleven stories, 125 feet tall, was an entire block long – over 400 feet – and the building was conceived in the style of a giant Renaissance palazzo. This colossus sufficed for little more than a decade when yet another expansion was contemplated. In 1906, a decision was made: A new, grander building – a skyscraper - would be erected. And *this skyscraper* would be the world's tallest!

When Napoleon LeBrun & Sons began their drawings for Metropolitan Life's skyscraper, the downtown Singer Building was still in the process of construction and it was destined to be the next "world's tallest." The Singer achieved that coveted title, but it was short-lived; Metropolitan Life's architects were eager to enter the record books.

Napoleon LeBrun (1821-1901) was born in Philadelphia and studied architecture under the tutelage of famed architect Thomas Ustick Walter (1804-1887). In 1841 LeBrun began to practice for himself in Philadelphia where he remained until he settled in New York City in 1864. In 1845 he married and soon had a family of three sons and two daughters. The eldest and youngest sons followed their father's career and with him formed the firm of Napoleon LeBrun & Sons in the early 1880's. Napoleon LeBrun was elected a fellow of the American Institute of Architects and president of the New York chapter. His prolific firm was especially noted as designers of churches, government buildings, and corporate headquarters. The LeBrun firm served as favored architects to the Metropolitan Life Insurance Company from 1876 until 1909.

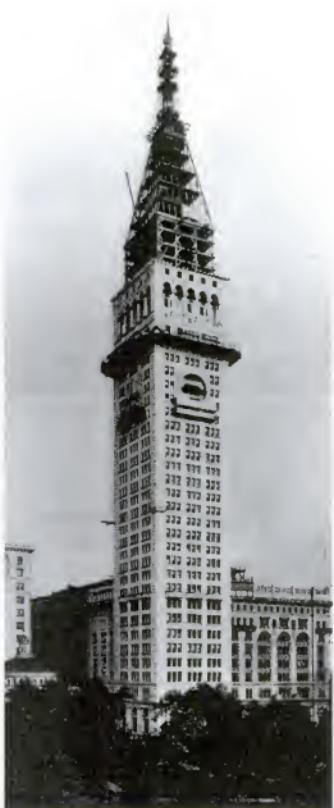
Napoleon LeBrun's architect offspring were Pierre Lassus LeBrun (1846-1924), and Michel LeBrun. These were the inheritors of their father's fortunes, the necessary corporate and cultural ties, and the valuable design skills required to maintain the firm's high standing. It must be emphasized that Napoleon LeBrun died in 1901, six years *before* Metropolitan Life's great tower was contemplated. It was his son, Pierre, who oversaw the commission from design sketches to building completion.



(173) This is a view of the Metropolitan Life Tower shortly after its 1960's remodeling. To the left is the North Building (Harvey Wiley Corbett and D. Everett Waid) a 1933 addition. This was originally planned to rise eighty stories, some 1,200 feet, but due to the economic uncertainties of the time the North Building was trimmed to 31 floors, 451 feet. Had it been constructed as planned the North Building would have surely and decisively trumped the 1909 landmark. The Metropolitan Life Insurance Company.

(174) The Venetian prototype for Manhattan's tallest: The campanile of San Marco.

On January 4th, 1907, the New York Times published Metropolitan's plans to erect the world's tallest building. The chosen plat of land, measuring seventy-five feet on Madison Avenue and eighty-five feet on 24th Street, was immediately adjacent to the Metropolitan's eleven-story headquarters. The statistics were staggering, and the city was fascinated! The skyscraper would stand fifty stories, 700 feet high – just ninety-two feet taller than its rival, the Singer Building. Here was a "stratospheric coup" the likes of which no one had ever seen before, it was an act of skyscraper one-upmanship certain to be repeated – by others.



(175) Construction of what was to be the tallest building in the world and the home to the Metropolitan Life Insurance Company. *The Great Towers of New York*, Gardner Richardson, The Independent, Vol. LXV, New York, Thursday, August 6th, 1908, No. 3114. p. 302.

(176) A 1915 lapel pin advertisement of Metropolitan Life Insurance Company's dependability; the beacon's light rays are metaphors of security and guidance. This "light that never fails" still shines over Manhattan.

Metropolitan's directors and their architects decided the form of the new skyscraper would be based upon a borrowing from the past – from the Italian Renaissance. This American financial giant would push into the sky a secular campanile, one resembling the famous Venetian campanile of the piazza San Marco. The Venetian landmark was completed in 1514 and stood 325 feet. It served as a great bell tower of course, but it also served as a lighthouse, watchtower, and astronomical observatory. A strange twist of fate beset this tower on the morning of July 4th, 1902, when it fell in upon itself and crashed to the ground. Because of its notoriety Venetian officials declared that an exact replica of the campanile would be constructed. In an even stranger twist of fate, New Yorker's went on to complete a copy of a building that no longer stood and they finished theirs long before the Venetians raised their replica in 1912.

The Metropolitan Life Tower was opened to the public in December of 1909. It was a colossal achievement by any account. Its foundations sank forty-two feet beneath the sidewalk and it rose higher than any other building. Here was the ultimate corporate trophy.

The skyscraper's total floor area was calculated at 1,085,663 gross square feet – about equal to twenty-five acres. Its total weight was 42,000 tons, it had 1,400 windows, and it was dressed with 200,900 cubic yards of Alabama marble. Some 9,000 cubic yards of cement and fireproofing protected its steel girders and columns. The Tower was served by six electric Otis express elevators, four of which terminated at the fortieth floor, and two others that stopped at the forty-fourth.

The public's fascination and awe was satisfied only with a visit to the Metropolitan Life Tower's observatory. After an elevator lift to the forty-fourth floor, one had to follow a staircase up to the observatory on the fiftieth, 660 feet above the sidewalk. No one had seen anything quite like it. For only fifty cents people could drink in the view that encompassed "the homes of one-sixteenth of the entire population of the United States."

And the clock! Metropolitan Life's Tower was the first really tall building to feature an exterior clock. The base, of each clock face, rested 346 feet above the sidewalk, higher than most skyscrapers at that time. The clock faces, and surrounding decoration of marble wreaths of fruits and flowers, reach from the twenty-first to the twenty-third floors on all four sides of the building. Each clock face measured twenty-six feet, six inches in diameter and is faced with vitreous turquoise blue and white mosaic tile. The hands are built on iron frames, sheathed with copper. Each minute hand weighs one-half ton, and each hour hand weighs 700 pounds. Inside, on the forty-seventh floor, reside four bronze bells ranging from 1,500 to 7,000 pounds each. These signal the quarter, half, and hour intervals.

But perhaps the building's piece de resistance is above still. At the fiftieth floor commands a great lantern, a harbinger of power, wealth, and permanence. The eight-sided, gold anodized lantern houses a powerful, eight-foot-diameter, electric lamp – "The Light That Never Fails." This romantic messenger has reported the results of presidential elections by its aim in one direction or the other, and has nightly marked the world headquarters of the Metropolitan Life Insurance Company for almost a century. Each evening the Tower's top half is brilliantly floodlighted and is easily spotted miles away.

At its debut the Tower was hailed as a masterpiece, it was an instant landmark and the pride of New York. Its design was more than accommodating; it was a sensitive skyscraper, a building that didn't command the skyline but nestled into it. Here was a genteel giant, a "postcard" from the Renaissance. It is, therefore, especially tragic that a four-year renovation of the building, spanning 1960-64, yielded such tragic results. Too much of its exterior was lost at the behest of architects Lloyd Morgan & Eugene V. Meroni. The "modernization" stripped away those elements that lent character, wit, and metaphor to the Tower. The once-engaging arcades high in the tower are now chillingly reminiscent of a Giorgio de Chirico painting – they appear lonesome, desiring to speak yet possessing no voice. The "1890" headquarters suffered most, every vestige of the past was erased. What happened here was simply brutal.

Trinity Building

New York City

Francis Hatch Kimball, New York City

1905

United States Realty Building

New York City

Francis Hatch Kimball, New York City

1907



(177) Trinity Building



(178) An elegant example of the engravers art, this 1928 image of a stock certificate features New York's U.S. Realty and neighboring Trinity Buildings. American stock certificates celebrated the skyscraper's rise to prominence by including compelling views of buildings owned, occupied, or otherwise constructed by the corporation sponsoring the actual stock certificate. This practice began in the 1880's and continues to this day. Produced by American Bank Note Company, engraved and printed by H.B. Hall & Sons, New York.

A delightful pair of skyscrapers indeed, these two deserve to be examined together because they share much. The Trinity and the U.S. Realty buildings were constructed as speculative office buildings and they quickly filled with hundreds of tenants. Each is a steel-cage, slab-type skyscraper where no office overlooks a court or an airshaft. And each was designed by Francis Hatch Kimball (1845-1919), a prolific Gothic Revivalist who studied medieval church architecture in England.

Located at One-Eleven Broadway, the Trinity Building is the taller of the two office buildings and it rises twenty-one floors, 308 feet. Its Broadway front measures sixty-eight feet and the building stretches west 260 feet toward Trinity Place. Trinity's south facade rises from ground to summit without a setback and helps, with other nearby skyscrapers, to bracket famous Trinity Church (Richard Upjohn, 1846) and its graveyard.

The architectural style of the Trinity Building draws upon English Gothic religious and collegiate sources, and, of course, echoes the design of landmark Trinity Church. Pink granite from Maine distinguishes its base while the remainder of the structure is sheathed with gleaming-white Bedford limestone. Here English Gothic forms were employed by corporate money managers for their skyscraper in much the same manner, and probably with the same zeal, as those religious hawkers who commissioned the nearby church.

Atop the Trinity Building's twenty-one-story mass rises a four-story, eight-sided, observation tower. This picturesque, and idiosyncratic interpretation by Kimball features pinnacles, arches, sixteen gargoyles of winged dragons, and a copper covered hemispherical dome. Here, Gothic and Moorish influences were combined to create a real architectural tour-de-force.

The Trinity Building has retained its original, deliciously decorated, lobby. This ten-foot-wide interior "sidewalk" connects the building's east and west entrances and is a Gothic extravaganza. Gilded wood and plaster vie with stained glass for the visitor's attention. Saint-like figures peer downward from their lofts high up on the lobby's marble walls. The Trinity's ten passenger elevator housings are embellished with crockets, pinnacles, hooded figures, and brass-clad doors. This interior, not to be missed, remains an intact and original example of one of the great lobbies of a pioneer Manhattan skyscraper.

To the north of the Trinity Building is Thames Street, a narrow, thirty-foot wide thoroughfare. Also flanking Thames Street is the U.S. Realty Building, a virtual duplicate of the Trinity. A stroll down Thames Street can be an exhilarating experience; there is an energy in the space, the residual space, the leftover shaft of shadows that separates these antique giants. It is an overwhelming one-block journey, akin perhaps to the exploration of some primeval canyon, but with Gothic cliffs.

The U.S. Realty Building was constructed as speculative office space by the United States Realty and Construction Company. It stands at One-Fifteen Broadway and rises to a height of twenty-one floors, 280 feet tall. For sixty-one feet it fronts on busy Broadway, which is part of the same parcel where once stood the venerable Boreel Building (Stephen D. Hatch, 1879), a high-rise trailblazer that rose eight floors.

The U.S. Realty, like the Trinity, is faced with Bedford limestone and rests upon a base of Maine pink granite. Inside, much is the same too. The U.S. Realty's lobby is a public corridor, a means of travel between Broadway and Trinity Place. This space becomes an intimate "cathedral," an ancient and elongated volume. It is a powerful meld of the spiritual and of the commercial, of the sacred and of the profane.

The elevators that were originally put into service for both the Trinity and the U.S. Realty Buildings were of the hydraulic plunger type. Simply, for every foot the elevator went up, the plunger had to go down, 300 feet in all, straight into the bedrock below lower Manhattan. Each skyscraper had ten of these elevators, devices once considered quite modern.

The Trinity and the U.S. Realty Buildings each stand on seventy pneumatic caissons, each sunk seventy-five feet below the sidewalk. The cost of these two skyscrapers upon their completions reached \$15 million, and together, they contain 553,000 square feet of floor space.

Candler Building

Atlanta

George E. Murphy and George Stewart, Atlanta
1906

Asa Candler (1851-1929), founder of the Coca-Cola Company, was the sponsor for this seventeen-story skyscraper. This was the headquarters for Coca-Cola, the Candler Investment Company, the giant Central Bank and Trust Corporation, and other prominent Georgia business concerns. The Coca-Cola Company occupied floors sixteen and seventeen from 1906 to 1923.

Atlanta's Candler Building is one of the great pioneering skyscrapers of the South. The building's foundation work began on January 26, 1904. The excavation was tedious due

to the amount of solid granite that had to be blasted out so that work could proceed. Six months passed before the concrete foundations, those that rested upon the granite, were completed. Steel erection commenced about July 1st, and by the middle of January 1905, the Candler's steel skeleton was complete. In all, over 3,000 tons of structural steel and iron were used in its construction. The skyscraper was then sheathed with Amicalola marble, a bright-white stone mined in Georgia. The cornerstone laying/closing ceremony took place on December 20, 1905. A Bible, newspapers, and other effects were placed inside the tower's cornerstone for future generations to discover. The Candler Building's official opening occurred on January 4, 1906. This Beaux-Arts skyscraper has been a landmark ever since.

Originally the Candler was serviced by six passenger elevators of the "inverted plunger geared hydraulic type" manufactured by the Otis Elevator Company. These elevators were operated under a water pressure of 750 pounds per square inch and were considered by some to be the most modern of their time.

Below the street floor are two basement levels. The first can be reached by a wonderfully imaginative staircase that features a marble newel post carved in the likeness of a dolphin. The dolphin image refers to a series of public baths that were located here. In this vicinity was also located the "electric light plunge." The unusual contraption was described as follows:

The electric light plunge consists of a marble cabinet, some ten feet high and five feet square at the base, in which have been placed many incandescent electric lights. The cabinet is properly welded to form one piece. The sufferer from lumbago, rheumatism or other uric acid troubles, enters the cabinet, the door is closed and the lights turned on; these generate a heat, growing gradually to the incarnation of aridity. The pores are opened and pain from lumbago or rheumatism greatly alleviated.²³⁵

Another building amenity was its "refrigeration and cold storage plant." This area was designed especially for the storage of furs, costly rugs, and other valuables disturbed by the hot summers of Georgia. Furthermore, the building developers boasted approximately 7,000 incandescent lights, and more than fifty 1,200 candle power arc lamps. Interior woodwork originally included red Santo Domingo mahogany on stories one and two and quarter sawed oak on stories three through seventeen. All tenant floors are of maple, oak, and white pine.

Baltimore & Ohio Railroad Building

Baltimore

Parker & Thomas, Boston

Henry G. Morse, New York City

Herbert D. Hale, New York City

1906

The Baltimore & Ohio Railroad (B&O) was founded in Maryland in 1827, and it quickly became one of the greatest of the early railroads. In 1882, after two years of construction, a home office building was completed to the plans of Baltimore architect E. F. Baldwin (1837-1916). The B&O Railroad's headquarters and general offices were now housed in a seven-story, brick and stone pile topped with a mansard roof. This was the pride of the railroad and a showpiece for the city.

On the morning of February 7th, 1904, a fire began in downtown Baltimore and it was not extinguished until the 8th when much of the central business district was in rubble. Like other landmarks the B&O Railroad Building was also a casualty. Financial books and records, valuable papers, and the entire contents of the building were consumed. The total loss to the company was estimated at \$1 million. Temporary quarters were found, but before long a search for a new site commenced.

The Boston firm of Parker & Thomas, formed in 1900, was called to prepare plans for a new headquarters building. J. Harleston Parker (1873-1930) was born in Boston and was trained at "Boston Tech" and at the Ecole des Beaux Arts in Paris. The other principal of the firm was Douglas H. Thomas, Jr. (1872-1915), a Baltimore-born architect trained at the Massachusetts Institute of Technology. Parker & Thomas was recognized as the "lead firm" for the new B&O office project.

Two independent architects were also called upon to lend their expertise. One was Herbert D. Hale (1866-1909), a New York City-born designer who graduated Harvard College in 1888, and who further studied architecture at the Ecole des Beaux Arts. The other architect involved on the project was Henry G. Morse (1884-1934). Morse, a native of Canton, Ohio, studied architecture at the Massachusetts Institute of Technology.

The talent mustered for this project was indeed substantial. These men, and their firms, would be responsible for housing one of America's "titans of the railroad industry" in a new office building, planned to be the tallest skyscraper in Baltimore. And after two years of construction stood the thirteen-story building that the *Baltimore Sun* called "a palace" and a "lasting monument to Baltimore's progressiveness." The Baltimore & Ohio's new home, further billed "the largest office building in Maryland," officially opened on September 30th, 1906. Reports of the day continued:

Beginning in the wide corridors or entrance of the first floor, the eye immediately catches the artistic touch employed. For wainscoting (sic) a variety of marble is used. The base consists of Glens Fall black marble, the next layer has a bird antique green color, and the third portion, which extends nearly to the ceiling is of the Norwegian white grain. Black lion's heads project from a border on the elevator shaft. The marble is highly polished and fairly glistens. The ceiling is pure white plaster, with large rosettes as decorations, protruding here and there. The elevator grills help in the tastefulness of the effect. They have been painted white and covered with enamel, and the doors are of bronze, highly polished. Rich marble trimmings used are continuous on each of the 13 floors. In the upper stories the marble is known as English vein.²³⁶

The B&O Railroad, with its general office staff of over 1,000, occupied the whole of the building with no paying tenants, at least at first. The skyscraper's first floor housed the entry lobby, elevator lobby, and retail establishments. Floor two was the home to the treasury department, while the president, second vice president, and the law department occupied the third floor. Here too were private meeting and dining rooms. The building's fourth and fifth floors housed the first vice president and the third vice president respectively and with their appropriately sized private dining rooms. Auditing and general office departments were located on sixth through eleventh stories. The twelfth floor was devoted to the company's restaurant, a facility that boasted 500 could dine there simultaneously. A "draughting" room measuring 159 feet long originally occupied the top floor

along with various private-meeting rooms. Each floor was originally outfitted with two "toilet rooms" and two large safety vaults. Twenty electric elevators, complete with heavily carved bronze doors, served the structure. Each bronze doorknob was appropriately monogrammed with a "B&O."

The exterior of this steel skeleton skyscraper was equally impressive. The first three floors were walled with granite while all others were covered with limestone. In all, there were 1,700 windows. A granite sculpture group above the main entrance displays a giant globe flanked by an allegorical group that includes Mercury, the mythological Roman God of commerce and trade. Wrapping the skyscraper are stringcourses of egg-and-dart, carvings of fruit and lions' heads. The Ecole des Beaux Arts influenced the architects of the B&O Railroad Building. The Beaux Arts was the language employed by Parker and Thomas, a language of symmetry, monumental forms, stone-cladding, prominent statuary, and heavy cornices. From the demise brought about by the Fire of 1904 emerged a will by those in Baltimore to rebuild their downtown. By 1906, Baltimore awoke to a new and powerful image, to that of the city's tallest skyscraper - a symbol of civic progress.

Lincoln Building

Louisville

McDonald and Dodd, Louisville

1906

The Lincoln Building was the first major commission by the noted Louisville architects Kenneth McDonald and William J. Dodd. Standing fifteen stories, this was one of Louisville's first skyscrapers, and upon completion, it was the tallest in Kentucky. Louisville's Lincoln Savings Bank constructed the building in 1906 as its home office headquarters.

The Lincoln Building was a superb example of the Beaux-Arts style, and it recalled the work of contemporary eastern, and particularly New York, architects.²³⁷ The Lincoln stood as a solitary pillar, and of course was executed in the familiar tripartite organization. Stone and terra-cotta were its exterior materials, and its crown, the top two floors, was heavily embellished. The Lincoln's cornice featured giant lion heads²³⁸ and brought to termination the upward thrust of window bays and unbroken pilasters. Years after its completion the Lincoln was renamed the Washington Building, and in 1972, this fine old skyscraper was demolished, a victim of urban renewal.

*The Seligman Building, corner William and South William Streets, is a rather frightful example of the unwisdom [sic] of trying to variegate and diversify the accepted type of skyscraper; It is the rural carpenter's notion of "something fancy" done in durable and costly stone.*²³⁹

Seligman Building

New York City

Francis H. Kimball, New York City

Julian C. Levi, New York City

1907

The respected banking house of J. W. Seligman constructed this unusual skyscraper as its headquarters, on Hanover Square, just south of Wall Street. Eight immigrant brothers of German Jewish descent founded the bank in 1864. Soon after its charter, branch op-

erations were established abroad in London, Frankfurt, and Paris, and in America, San Francisco and New Orleans. Originally, all operations were controlled from offices located at Fifty-nine Exchange Place, in New York's burgeoning financial district. A location, One William Street, was chosen for a new and much larger headquarters.

What resulted from the architects' boards was a trim, ten-story column, whose walls rose sheer from the sidewalk's edge. Elements of the Renaissance, and of the Baroque, could be found in abundance on its rusticated stone walls. A pronounced reentrant corner marked floors nine and ten. To act as an exclamation point, to mark itself on the skyline, a circular tower – a tempioetto of sorts – was included high above the cornice line. The result of these "scooped-out" walls (floors nine and ten) and a tower that pushed outward and upward (the tempioetto), marks this building a very plastic form indeed. Many judged the Seligman Building the handsomest on Hanover Square, a mantle no doubt earned due, at least in part, to its skillful exterior modeling. Still, one particularly biting architecture critic, Montgomery Schuyler, termed this rooftop tower "...mere mindless caprice."

While the "accepted type of skyscraper" defies description, the enjoyment and dignity that the Seligman Building still offers Hanover Square cannot be measured. The Seligman banking house vacated their namesake building years ago; a newer location a few blocks away beckoned. Almost a century old, the Seligman still stands, fully occupied and presiding over the steep canyons and narrow, ancient streets of the financial district.

Keenan Building

Pittsburgh

Thomas Hannah, Pittsburgh

1907

One of the more distinctive office skyscrapers of the early twentieth century is this domed structure. The Keenan rises eighteen floors, 250 feet, stands on a steel frame, and has a brick and terra-cotta envelope. The tower's shaft is quite undistinguished, even streamlined by comparison to other contemporaries. A prominent classical cornice separates the mundane office shaft from the building's top, which erupts into a neobaroque fantasy of domes, finials, and decorated circular window openings. The dome's structure is of concrete and it is reported to be the world's first poured-concrete dome. It is sheathed with painted tiles and is flanked by four smaller domes.

This tower's builder and first owner was Thomas Johnston Keenan (1859-1927), journalist, editor, and publisher of the Pittsburgh Press (1884-1901). The skyscraper's largest dome once embraced the penthouse apartment of Mr. Keenan. Originally containing 70,000 square feet of office space, the entire Keenan Building was converted into residential condominiums during the 1980's.



(179) Keenan Building



(180) West Street Building

West Street Building

New York City

Cass Gilbert, New York City

1907

This skyscraper was the brainchild of Howard Carroll, owner of the parcel at 90 West Street in lower Manhattan and the vice president of a large transportation company. Carroll's aim was to construct not just any speculative office tower, but a "high-profile advertisement for business enterprise." The project's neighborhood, on the very edge of the Hudson River, marked the center of transcontinental and international cargo shipping. Freight was moved at a feverish pace from ships and barges to rail cars and vice versa. In addition, each day hundreds of passenger ferries loaded and disgorged countless thousands within a block of the planned skyscraper's site. The teeming neighborhood, with Wall Street banks and financiers to the east and the waterfront to the west, proved an unbeatable nexus with which to target tenants. Those sought after as potential "space takers" were freight handlers, insurers, steamship and railroad concerns, and shipping companies. Knowing that the building would fill with paying tenants in short order the project proceeded with confidence. Plans were filed with the proper municipal departments in September, 1905 with construction promptly commencing in April, 1906.

Completed in October, 1907, and named the West Street Building (it stood on West Street between Albany and Cedar streets), it rose as a free-standing tower of twenty-three floors, 404 feet high. Architecturally it was a neo-Gothic extravaganza and immediately acclaimed by some an architectural marvel. In plan it was a parallelogram and from its lobby rose nine passenger elevators, six local cars and three express. Above were some 400 offices with ceiling heights varying from ten to seventeen feet; the structure boasted 360,000 square feet of rentable office space. Exterior walls were composed of white glazed and poly-chrome terra-cotta and bore a variety of gargoyles and buttresses. Topping the building was a copper-clad, forty-five-foot tall, mansard roof that was brilliantly illuminated each night.

One of the skyscraper's first and largest renters was the *Delaware, Lackawanna, and Western Railroad Company*, a firm that leased floors seventeen through twenty; such a prominent renter who absorbed so much space was a definite coup to any real estate promoter, especially for a newly opened building. Besides this railroad, the West Street Building quickly became the home to those firms having business on the waterfront in all its various forms, and coal and iron concerns. As a novelty of sorts, the skyscraper's twenty-third floor was home to the Garrett Restaurant (named presumably as reference to the op floor attic room of a house or building), one of the earliest such examples in New York, or elsewhere, whereby people could dine atop a skyscraper – in 1907.

The West Street Building still stands, despite its almost complete obliteration during the events of September 11th, 2001. The grand dame of West Street was partially crushed and its north façade erased due to the falling debris of the World Trade Center and the second passenger jet. After considerable debate and its almost certain demolition, it has been decided to restore the skyscraper to its former glory, this time as condominium homes.

Los Angeles Trust and Savings Bank Building

Los Angeles

Parkinson and Bergstrom, Los Angeles

1907

A simple and elegant Beaux Arts design describes this skyscraper bank that stands on the northwest corner of Sixth and Spring streets. Rising eleven stories, the Trust and Savings Bank clearly displays some of the finest detailing downtown and includes Corinthian pilasters, pedimented windows, walls covered with architectural flourishes, and distinctive saw-tooth corners. The building is clothed with white terra-cotta and tile.

Shortly after completion the bank, to assure depositors, advertised that their headquarters housed "massive armor plate safe deposit vaults." On March 30th, 1929, the Los Angeles Trust and Savings Bank merged with the Security Trust and Savings Bank to form what is now known as the Security Pacific Bank, one of America's largest banking institutions.

Corbett Building

Portland

Whidden and Lewis, Portland

1908

Portland's Corbett Building is a 20th century design masterpiece. Few early skyscrapers

so clearly express their internal steel frame, and so successfully employ a curtain wall system, as does this landmark. All extraneous ornament was eschewed in favor of clean surfaces and glass-filled bays. The first two floors were originally occupied by retail and commercial concerns, hence the large light emitting panes. Floors three through nine are expressed differently, their function is office use. The tenth, or penthouse floor, breaks from the cubic mid-section, and is topped by a pronounced *classical cornice*. Unfortunately, the architects' apparently capricious choice to employ images from antiquity compromises what might have been an even greater design tour-de-force.

Liberty Tower

New York City

Henry Ives Cobb, New York City

1909

Trim and elegant, the Liberty Tower rises sheer from the street eschewing setbacks of any kind. Located at 55 Liberty Street this landmark skyscraper is one of a dwindling few neo-Gothic office towers in lower Manhattan.

The Liberty Tower stands thirty-two stories, 385 feet tall. It rises from a footprint measuring fifty-eight by eighty-two feet. A pneumatic caisson foundation, reaching down ninety-five feet to bedrock, supports the building. The Liberty required special and extensive wind bracing throughout due to its height and relatively small site.

In 1909, the Liberty Building stood tight in a thicket of skyscrapers and was confronted by the Singer, City Investing, Washington Life, and Equitable Life buildings. Within four years of the Liberty's completion, the Woolworth Building, perhaps the world's most famous Gothic skyscraper, was completed, and perhaps in some small part owed its design to this forerunner.

Henry Ives Cobb (1859-1931), distinguished architect, teacher, and considered one of the greatest practitioners of the Romanesque and Gothic styles, was responsible for the design of the Liberty Tower. His tallest work has a steel frame, is served by five electric elevators, and is covered with white terra cotta. The top half of the Liberty Tower is sprinkled with various grotesques, pinnacles, finials and intersecting gables. Its roof is steeply pitched, covered with copper, and it is topped with medieval cresting.

Due to its proximity to the New York Stock Exchange and dozens of banks and related businesses, the Liberty was naturally home to corporations, brokerages, lawyers and other financial concerns. The business syndicate that constructed the Liberty Tower owned the building until 1919 when the Sinclair Oil Company purchased the building. Sinclair used this tower as their headquarters until 1945 when it relocated to Rockefeller. As before its sale, the building resorted back to being a multi-tenant office building. In 1979, the Liberty Tower became a residential cooperative building featuring eighty-nine spectacular homes.

Firemen's Insurance Building

Newark

Morvin and Davis, Newark

1910

The Firemen's Insurance Company constructed a prominent four-story office building, c.1870, on the northeast corner of Broad and Market streets in downtown Newark. This flamboyant Victorian building featured a large metal statue of a fireman positioned upon one of its mansarded towers. Business growth and the high value of real estate at that coveted corner - in 1910 a foot of property fronting on Broad Street near the corner of Market was valued at \$5,000 - were cited as reasons for its demise. It was soon replaced by a new headquarters tower, a building trumpeted as Newark's first skyscraper.

Bold, wonderful, and pioneering were adjectives used to describe the Firemen's sixteen-story, 220-foot tall building - then alone on Newark's skyline. No longer alone, this skyscraper contains 60,000 square feet and is serviced by two electric passenger elevators.

Vertically, the Firemen's Insurance Building has a clearly defined base, mid-section, and top. Its three-by-five bay system and an abundance of windows betray a curtain wall exterior. The tower's overall classical design is reinforced by two-story Ionic columns that encircle the building's fifteenth and sixteenth floors. Limestone, white terra-cotta, and glass compose the building's street facades which are topped by a heavy cornice.

In 1944, the Firemen's Insurance Company sold this building and moved to newer quarters. The building still stands at 786 Broad Street.

Old National Bank Building

Spokane

D. H. Burnham & Company, Chicago

1910

Designed by Burnham and constructed by the Old National Bank of Spokane after a nationwide design competition, this skyscraper is truly formulaic and very Burnham-esque. No new architectural or design theories were promoted for this project. The bank contracted, and got, a solid, functional, and conservative design that appropriated antique forms for a building in America's Pacific Northwest. Nonetheless, this office building was, and still is, considered beautiful, and in a more mercenary sense it has enjoyed a solid rental record returning handsome profits to its builder and owner.

Construction of the Old National Bank Building lasted less than one year, having been completed in early December, 1910, and officially opening in January, 1911. The project's entire cost totaled \$1.3 million, and from the outset was ninety-percent rented. The building stood tall on the Spokane skyline reaching sixteen stories, 217 feet tall. It originally housed 410 offices and 126,000 square feet of floor space. For vertical transportation five Otis-manufactured elevators were installed, each traveling 600 feet per minute. Fifteen miles of electric wire were woven throughout the building. The building's structure required 26,036 tons of steel.



(181) Old National Bank Building

The interior of the Old National Bank Building was originally quite lavish. Fine stone and expensive wood marked all public areas. The entire building was equipped with tungsten lamps with fixtures of black satin finish. The grand lobby and giant banking room consisted of Ionic columns, marble floors, a coffered ceiling, and fancy globe chandeliers. Rest rooms for men and women were located on the ninth floor, the men's adjacent to a "first class barbershop," the women's served by a "maid in charge." In addition, there were rest room facilities on each office floor. The second floor corridor walls were treated in glass instead of marble thereby giving tenants full view and allowing sunlight to penetrate deeply into the center of the building.

Classicism was the source of this tower's exterior design too. The outside features highly detailed entrances, Roman pilasters, dentil courses, stringcourses, arcades, and acroteria up top. Materials included glass, copper, and cream-colored terra-cotta.

The new skyscraper's tenant roster, so characteristic of that period, lends insight into the professions practiced by those in the building:

Accident, life and fire insurance, doctors, lawyers, mining engineering, mining corporations, blue printing, barbers, securities, wire and wire roping, investments, machinery manufacturers, real estate dealers, accountants, casualty companies, cement manufacturers and dealers, railroad managers, fruit growers' exchange, merchants' association, wholesale shoe dealers, development companies, club and association headquarters, coal-merchants, construction companies, paving contractors, building contractors, irrigation companies, architects, wire cloth dealers, grain and warehouse companies, railroad contractors, public stenographers, financial agents, capitalists, cigar store, drug store, typewriter agents, bank brokers, sugar merchants, loans, timber dealers, fuel and ice.²⁴⁰

Peoples Gas Building

Chicago

D.H. Burnham & Company, Chicago

1911

The Peoples Gas Light & Coke Company of Chicago--a giant utility, employing thousands, sponsored the erection of this monumental skyscraper. Founded in 1850, the company was by the turn of the twentieth-century "one of the largest singly operated gas companies in the world." By 1928 the yearly output to customers was forty-one billion cubic feet of gas, Peoples Gas becoming *the world's largest supplier.*²⁴¹

It became apparent to the officers of the company that continued success would require a new office building for itself - with rental possibilities - at a high-profile location, and with a "presence." The corporation insisted that its home office and headquarters building be nothing less than imposing and the greatest architectural monument on North Michigan Avenue. Architects were queried and the firm of D.H. Burnham & Company was selected.

A building site on the northwest corner of Michigan Avenue and Adams Street was acquired. The parcel would be completely occupied: 196 feet along Michigan, 171 feet on Adams. The skyscraper's style would be "commercial" with definite classical overtones. Two years would pass from excavation to completion and at its opening the Peoples Gas Building was pronounced a triumph. Its large size allowed it to be seen for miles around, especially from anywhere on the expansive lawn of Grant Park and from all ships and boats along the lakeshore. The skyscraper that millions of utility bills built stood twenty floors and towered 297 feet above the sidewalk.

Conceptually the Peoples Gas Building is an immense, hollow, gray-granite box with rows of offices located around its outer perimeter, and more ringing its inner perimeter light court. It contains 510,000 rentable square feet of office space, has some three-thousand windows, and features a bank of fourteen passenger elevators. Its total cost, in 1911, was \$3 million - a *small fraction* of what a building of this stature would cost today.

This skyscraper's exterior walls are superb. The "public walls," those on Adams and Michigan, are the most ostentatious. These are of gray granite and are highly ornamented. Colonnades of Ionic columns, marking the public-accessible first and second floors, are repeated at the seventeenth through nineteenth stories with the building's top marked by a pronounced stone cornice. These granite columns support only themselves as load-carrying steel "shelves" cantilever above them and provide support for the building's curtain wall of stone and glass; the "shelves" cleverly transfer the gravity loads to the building's steel skeleton. The People's Gas Building has two basements and is supported by means of hundreds of hardpan caissons.

Still standing, the Peoples Gas Building played many roles during the last century. Of course it was the home office of a major utility, and as such the company's image was important; Roman Classicism was employed to drive home the point. This skyscraper was also called home by countless clients, renters seeking a prestigious address and opulent surroundings. The building's public spaces were temple-like, instrumental in "transporting" the Chicago consumer to another place and time. One did not *only* pay one's gas bill here, but it was here that one "acquired" gas heat, gas light, and the secu-

rity and comfort that these provided to one's family. For customer service one had only to ascend to the second floor's "temple of transaction," and for the exchange of money one could live better than any Roman emperor.

Bromo-Seltzer Tower

Baltimore

Joseph E. Sperry, Baltimore

1911



(182) Bromo-Seltzer Tower

One of the most distinctive skyscrapers anywhere, the Bromo-Seltzer Tower rises fifteen floors, 290 feet tall. This building was constructed as the home office and laboratories of the Emerson Drug Company, the manufacturer of the antacid Bromo-Seltzer.²⁴² Baltimore's Bromo-Seltzer Tower was constructed with a steel skeleton and covered with a yellow brick veneer. It contained two elevators and dozens of offices.

Inventor, and founder of the company, Isaac E. Emerson, visited Europe and was impressed with the architecture in Florence, Italy. More specifically, Emerson admired the Palazzo Vecchio.²⁴³ Emerson requested that his architect, Joseph E. Sperry, design a laboratory and office complex that recalled the design of the Palazzo Vecchio. What transpired was indeed a design that closely approximated Florence's famous tower.

Like its European model, the Bromo-Seltzer Tower also sports a clock, except that Baltimore's has four faces. Upon completion, this clock was said to be the largest four-faced gravity clock in the world. Each dial is twenty-four feet in diameter, while each minute hand is twelve feet seven inches long, and weighs 175 pounds. Each hour hand is nine feet eight inches long and weighs 145 pounds. The pendulum is fifteen feet long and weighs 475 pounds. The clock is automatically wound by an electric motor every six hours.

When completed, a facsimile of the original Bromo-Seltzer bottle topped the tower. It stood fifty-one feet tall, was twenty-one feet in diameter, and weighed seventeen tons. There were 596 electric lights in the bottle and the crown that surmounted it. At night this landmark "beacon" was visible for over twenty miles. Tragically, the bottle and its crown were removed in 1930, and, in a Florentine manner battlements were added. In the late 1960's the makers of Bromo-Seltzer moved out of Maryland. The plant that embraced the tower was demolished leaving the tower in a rather awkward, and solitary, position.

The architect of this unique urban adornment was the Georgetown, South Carolina-born Joseph Evans Sperry (1854-1930). The Baltimore-based Sperry specialized in the design of medical schools, hospitals, and clinics with additional forays in the world of churches, synagogues, and some office buildings.

Germania Life Insurance Building

New York City

D'Oench & Yost, New York City

1911

Standing on the edge of historic Union Square is the monumental and free-standing tower that has weathered almost a century of change, the Germania Life Insurance Building. When completed the twenty-story building stood unrivaled, it dominated Union Square as few buildings nearby challenged its 281-foot height. This skyscraper rises without setbacks and draws heavily upon nineteenth-century European architecture. French and German commercial styles figured prominently in its design. It is a top-heavy, brick and stone pile despite its diminishing size.

The major visual and architectural element of the building is, of course, its mansard roof. Herein is contained the top four floors with each window granted a dormer. The mansard is trimmed with copper, hued green long ago.

The company, Germania Life Insurance, was founded in New York City in 1860. The firm's early goal was to provide life insurance to an ever-increasing German-speaking public. This strategy was quite successful and the company prospered. Then the "war to end all wars" was unleashed in Europe with the Kaiser as our greatest foe. During World War I anti-German sentiments were such that by 1918 the company's name was changed to the *Guardian* Life Insurance Company.

One of the architects responsible for the design of the Germania was Abert F. D'Oench (1852-1918). Born in St. Louis, he studied there at Washington University graduating in 1872. He pursued further education at the Brooklyn Polytechnic Institute at Stuttgart. He worked as a draftsman in the office of Leopold Eidlitz and later entered Richard M. Hunt's office. In 1881, he started independent practice. The Germania Life Building was considered his most important building.

The other architect involved was Ohio-born Joseph Warren Yost (1842-1923). He began his professional practice in Columbus, Ohio, and then he established an office in New York City with D'Oench. In 1901, the firm was established as D'Oench & Yost.

Savannah Bank & Trust Building

Savannah

Mobray & Uffinger, Savannah

1911

Rising ten floors, this early Georgia skyscraper was originally constructed as the National Bank of Savannah Building. Its bold corner entrance is a rare typology for a high-rise building, yet it seems to be quite effective here. The brick-faced Savannah Bank & Trust Building was designed in the neoclassical style and it is trimmed with much decorative terra-cotta.

Maryland Casualty Building

Baltimore

Parker, Thomas & Rice, Boston

1912

When completed, the Maryland Casualty Company's building was Baltimore's tallest. It rose eighteen floors, 341 feet tall, and recalled the Baroque bell towers of Europe. The celebrated tower rose from a five-story office block below, and featured a giant Seth Thomas clock with a seventeen-foot-wide face. It was reported that the clock was "visible from all parts of the city and at the top is operated an official time ball, which is controlled by wire from Washington. This ball drops at 12 o'clock noon."

The Maryland Casualty Building was also known as the Hearst Building (newspaper mogul William Randolph Hearst bought the building in 1923), and later, as the Tower Building. Originally its eighteenth-floor was the site of a public observation balcony from which one could oversee the city and Baltimore's inner harbor. This gallant, early skyscraper, rich in history and architectural details, was razed in 1986.

In 1900 the architectural firm of Parker & Thomas was founded by J. Harleston Parker (1873-1930) and Douglas H. Thomas Jr. (1872-1915) in Boston. Parker, a native of Boston, studied architecture at Harvard, graduating in 1893. He pursued further study by attending, for four years, the Ecole des Beaux Arts in Paris.

Douglas H. Thomas, a Baltimore native, studied architecture at Johns Hopkins University and the Massachusetts Institute of Technology; after graduation from MIT in 1895, Thomas studied further in Paris.

Bostonian Arthur Wallace Rice (1869-1938) joined the other two architects forming

Parker, Thomas & Rice in 1907. Rice, too, was well educated having graduated from the Massachusetts Institute of Technology in 1891 and garnering further design skills in Paris. Together these men were responsible for an astounding architectural portfolio, a body of work that included the baroque-inspired, idiosyncratic Maryland Casualty Building.

Bankers Trust Building

New York City

Trowbridge & Livingston, New York City

1912

In 1903, a group of New York City financiers, one of whom was none other than J. P. Morgan, formed the Bankers Trust Company of New York. After renting at a series of locations in the financial district, One-Forty-Three Liberty and Seven Wall, the Bank decided to construct its own tower and make its own mark on New York's skyline. But first, the Gillender Building (Berg & Clark, 1897) had to be pulled down, and by the spring of 1910, it was.

Soon after the Gillender's demise construction began on the Bankers Trust Building. A seven-foot-thick cofferdam, or concrete box constructed to keep out ground water, was built at the site's periphery. Inside this, is where steel piers were sunk to some sixty feet and where they still rest upon solid bedrock. The site measured ninety-four by ninety-seven feet and the building filled all of it. The public were told the following:

The building will be a thoroughly modern fire-proof steel-skeleton structure, with every known modern improvement, and the ceilings of the office floors will be higher than usual, in order to furnish well-lighted and pleasing offices.²⁴⁴

Indeed, the original cost of this skyscraper totaled over \$4 million and one "modern improvement" included its eleven electrically operated passenger elevators. Originally, the thirty-foot-tall second floor, measuring about ninety feet square, housed the bank's main offices. This space is free of structural columns; the interior steel columns of the building are carried above the banking room by means of enormous steel trusses. Below the lobby floor are three basement levels, the lowest of which housed the power plant, the other two were originally occupied by the Bankers Trust Company for storage purposes and the great vaults of the bank.

The Bankers Trust Building is faced with New England white granite and was designed in a Classical Revival style. The exterior of the Bankers Trust Building makes this one of the grandest and most identifiable skyscrapers in the Manhattan skyline, due in no small measure to its distinctive pyramidal roof. The building stands thirty-nine floors, 539 feet tall. It rises with no setbacks until the level of the thirty-second floor, which marks the base of the stepped pyramid. An outdoor promenade here encircles the topmost habitable floor and is just below the first of twenty-four granite steps. This four-sided pyramid contains six, fireproof, attic floors and one penthouse floor, the thirty-second. This was once Manhattan's highest *pied-a-terre*, the private apartment of Wall Street titan J. P. Morgan. Here was a series of private rooms including his library, dining rooms, and parlors each with spectacular vistas. This personal lair was tastefully, not ostentatiously, decorated with dark colored hardwoods and solid, overstuffed furniture.

The Bankers Trust Building illustrates the power of architecture to convey meaning by looking backward to the ancients. The tower's top evokes one artists' conception of one of the Seven Wonders of the Ancient World, the Tomb of King Mausolus at Halicarnassus completed in c.350 B.C.E. Such a choice to emulate signifies a desire for permanence, strength, and timelessness. Others, claim that the building's architects modeled the summit after a portico at Palititiza in Macedonia. Whichever is true, if either, the Bankers Trust Building has earned a reputation for being one of New York's most recognizable and noteworthy skyscrapers.



(183) Bankers Trust Building



(184) Buffalo General Electric Building

Buffalo General Electric Building

Buffalo

Esenwein and Johnson, Buffalo

1912

This is perhaps one of the most idiosyncratic skyscrapers ever realized. The design of the Buffalo General Electric Building was loosely based upon one of the Seven Ancient Wonders of the World, the Lighthouse of Alexandria. Artists' interpretations of the great Egyptian tower, completed in 246 B.C.E. by Greek architect Sostratos, were used as inspiration in the design of this Buffalo office building.

By harnessing the power of the mighty Niagara River, Buffalo became the first city in the

country to light its streets with electricity; its prominent tower then became a symbol, a celebration of accomplishment. Appropriately, Buffalo's local electric and light company constructed a skyscraper whose summit is floodlighted nightly. The Buffalo General Electric Building is coated with white glazed terra-cotta and it pokes skyward eighteen floors, 283 feet above the sidewalk. The part of this skyscraper is a telescoping octagon and it remains today as a landmark in downtown Buffalo.

The antecedent of the Buffalo General Electric Building, the Lighthouse of Alexandria, stood at the harbor entrance of Alexandria, Egypt, and rose above the island of Pharos before it was felled by an earthquake in 1375 A.D. Various reports list its height somewhere between 400 and 600 feet tall. It was composed of three main sections: a square stone platform, a middle portion of eight sides, and a circular top section. A giant fire burned atop the lighthouse and provided more than just a light for mariners. This was architecture of pure fantasy which delighted ancient Alexandrians in much the same way that the Buffalo General Electric Building must have delighted the citizens of Buffalo.

Now known as the Niagara Mohawk Building, this landmark was formally opened on May 1, 1912. It is curious that a building employing maritime imagery, symbolic forms of guidance and safety at sea, was opened only two weeks after the sinking of the steamship *Titanic*.

In silhouette the Woolworth is a wonderful giraffe with extended neck and sculpted hind-quarters - it stands vigilant over skyscraper grasslands and busy city thatch.

Woolworth Building

New York City

Cass Gilbert, New York City

1913

Precisely at 7:30 p.m. on Thursday evening, April 24th, 1913, the twenty-eighth president of the United States pressed a button in the White House and lighted the Woolworth Building's 80,000 light bulbs marking the official opening of the World's Tallest Building. The skyscraper glowed. Woodrow Wilson's gentle gesture prompted Methodist Pastor S. Parker Cadman, one of the guest speakers for the opening festivities held on the twenty-seventh floor, to "christen" the Woolworth Building "The Cathedral of Commerce." Eight hundred celebrants rejoiced in the metaphor and noted it for posterity. Cadman continued:

Just as religion monopolized art and architecture during the Medieval epoch, so commerce has engrossed the United States since 1865...Here, on the Island of Manhattan ... stands a succession of buildings without precedent or peer...Of these buildings, the Woolworth is Queen, acknowledged as premier by all lovers of the city...by those who aspire toward perfection, and by those who use visible things to obtain it.²⁴⁵

The journey from one "five-and-ten" to *The Tallest Skyscraper on Earth* was long and arduous. Frank Winfield Woolworth (1852-1919) was born and raised on a farm near Rodman, New York. He worked at a series of jobs before choosing a mercantile career. In 1879 Woolworth opened the "Great 5-Cent Store" in Utica, New York. Shortly thereafter he closed his first store and traveled to Lancaster, Pennsylvania, there to establish his retail empire. Again, Woolworth would relocate. In 1886, Frank Winfield Woolworth

with his corporate headquarters and family in tow would move east, his business to Manhattan and his family to Brooklyn. The company's headquarters was first located at 104 Chambers Street, then in the Stewart Building at 280 Broadway. From there, twenty-five years later, the headquarters would change locations for the last time.²⁴⁶

In 1909, Woolworth decided on a new venture and he sought out one of the most celebrated and prolific architects of the day, Cass Gilbert. A decisive meeting occurred when Woolworth shared his plans to erect a tall building for a corporate home office. For two years architect and client pored over some thirty design schemes, most of which were Gothic Revival. Dashed were any building designs of just thirty or forty floors. Neo-Classicism of any kind was eliminated. One story, perhaps anecdotal, has Gilbert showing a photograph of Victoria Tower, at London's Parliament, to Woolworth.²⁴⁷ The one-time farm boy, now millionaire merchant, requested that *his* building recall the designs of Gothic Europe, religious and secular, with special emphasis drawn from the Victoria Tower.²⁴⁸ Gilbert obliged.

(185) The Woolworth Building stands one-third the way to the Title. The "tall" New York Post Office (Alfred B. Mullett, 1875) with its prominent mansard roof is to the left. History-Image, New York City. Original image by Irving Underhill, New York City, #C-8543, "Made on April 4th, 1912."





(186) The World's Tallest Woolworth Building lords over the mansard-roofed New York Post Office of 1875, one of the tallest of *its* age.

Woolworth soon realized that he could have for himself a "trophy" building, one instantly recognizable, a great skyscraper in the ultimate Skyscraper City; the following conversation betrays as much:

Gilbert: How high should our building be?

Woolworth: 750 feet.

Gilbert: Am I limited to that?

Woolworth: That's the minimum.²⁴⁹

Months before this significant conversation occurred Frank Woolworth acquired the corner plot on Broadway and Park Place. Moving rapidly, Woolworth swallowed six more parcels giving him control of an area large enough for a substantial skyscraper. Both Woolworth and Gilbert embraced a Gothic Revival design for a skyscraper of 55 floors,

792 feet tall. Cass Gilbert and staff churned out a complete set of construction documents (architectural drawings) in an astonishing eighty-six days.²⁵⁰ The site was swept clean, and the signal was given that site clearance and excavation could commence. The date was April 1910.

The firm selected by Mr. Woolworth to construct his tower was the Thompson-Starrett Company of New York. Louis J. Horowitz was "chief" of one of the country's most respected contractors and a leader in skyscraper construction in New York and elsewhere. Horowitz realized that securing this commission would be invaluable to his firm, to any firm that prevailed, and years later he would write "the Woolworth Building was a prize for which contractors were almost ready to trade an eye or leg." After the usual professional posturing Louis J. Horowitz came away from Mr. Woolworth with a signed contract dated April 20th, 1911. Further insight is provided by the victor:

When first projected, the building had been designed as one to rise 692 feet, but Woolworth had a secret. As he expressed it, he had determined to play a joke on the populace by keeping 100 feet 'up his sleeve.' By this device he meant to insure for himself for a longer time the glory of owning the tallest building in the world. It was, indeed, a startling piece of news when it was first announced that the finished structure would lack only eight feet of being 800 feet high.²⁵¹

The footprint of the proposed skyscraper measured roughly 152 feet fronting on Broadway, 198 along Park Place, and 193 on Barclay Street. Within these confines stood a collection of rather dilapidated, residential, and retail buildings. These would be reduced to rubble in rather short order paving the way for a massive excavation.

On May 7th, 1911, The New York Times announced:

Woolworth Building Will Be World's Greatest Skyscraper

Fifty-five Stories High, Rising 750 Feet Above Broadway,

Overlooking the Post Office

Rays from Electric Light in Tower Will Be Visible Ninety-six Miles Out to Sea

Operation Involves Millions of Dollars.²⁵²

It was official. The statistics heralded by *The New York Times* said as much: "World's Greatest Skyscraper" translated into "World's Tallest Skyscraper."

A giant rectangle of earth and rock, measuring between thirty and fifty feet deep, was systematically gouged out of Manhattan. From this hole's floor sixty-nine caissons, some as wide as nineteen feet, were driven to their refusal point. Depths measured 110 to 130 feet below the excavation's floor. The caissons were filled with concrete, and in tandem would provide support for the mighty Woolworth Building.

On November 15th, 1911, the Woolworth's steel skeleton emerged slightly above the sidewalk. With the foundation work completed steel erection progressed rapidly. On July 1st, 1912, a large American flag was unfurled above the last steel member positioned proclaiming the Woolworth Building tallest on Earth.

A truly massive amount of work still lay ahead. With no floor in the building less than eleven feet high, and some measuring twenty feet, there was much wall space to complete and decorate. Exotic marbles were imported from various Mediterranean quarries

and were affixed to the walls of the grand lobby. Twenty-six electric elevators were installed and fitted with specially designed bronze elevator doors. In the building's sub-basement were placed the boilers and coal storage bins, electric generators, water filtration plant, refrigeration plant, and a host of other mechanical equipment. Over one-hundred washrooms, company cafeterias, private executive dining rooms, and miles of corridors had to be outfitted. Craftsmen of all types were employed.

Though still under construction, the building was considered the most modern as it featured thermostatically controlled central heating, electric lighting throughout, modern plumbing, and complete telephone service. Especially notable was the Woolworth Building's *elevator* telephone system, a feature that allowed riders the ability to conduct business by phone anywhere in the world – while moving! Furthermore, two subway lines served the skyscraper with their stations conveniently located in the lower concourse of the building.

Outside, visitors and New Yorkers alike were transfixed; they had never seen anything quite like it. An office building nearing the height of one thousand feet was unthinkable just a generation ago. Accustomed to seeing nothing rival the Metropolitan Life Building in height and majesty startled some, yet all accepted that very soon the tiara would be passed from the uptown tower to the new "Queen of Skyscrapers" in all its Gothic finery.

As the Woolworth Building boldly rose above the clatter of lower Manhattan "sidewalk superintendents" watched the building evolve from a tangle of steel into a graceful swan. The main block rose twenty-nine floors, and in plan, the customary U shape became visible. Atop each leg of the U were two floors tucked into a large copper gable roof. Above these grew the tower measuring eighty-four by eighty feet at its base, then telescoping upward to its pinnacle. Closer inspection revealed that the first three floors were laid with limestone and above that the building was wrapped with cream-colored terracotta – some at higher levels was poly-chromed to emphasize the richness of its Gothic tracery. Every artistic device known to Gothic builders was incorporated on the exterior and included flying buttresses, pointed arches, gargoyles, trefoil decoration, crockets, finials, and more. High above were positioned carved heads representing the continents of America, Africa, Europe, and, Asia. Higher still were gargoyles depicting frogs, owls, pelicans and, bats.

Through the two years of construction Woolworth operated 596 stores nationwide. Business would not cease due to construction. At the opening of the skyscraper the press discovered that the building had no mortgage and that Mr. Woolworth paid for "his" building in cash – \$13.5 million. Furthermore, Woolworth announced that the building stood 792 feet, one inch tall; at high tide its summit reached 947 feet, two inches, above sea level. Woolworth continued:

One fine day I went to the very pinnacle of the Tower, and walked down from that exalted height to the sub-basement of the building... The building as it stands is 60 stories high.²⁵³

It was also reported that the Woolworth Building was serviced by its own, privately staffed, fire, police, and detective division. In-house cleaning, repair, and general maintenance departments also served the building. Tenants were catered to and made to feel secure in Woolworth's care. Frank Woolworth's private office, measuring thirty feet square, was located on the twenty-fourth floor and faced south and east. All executives

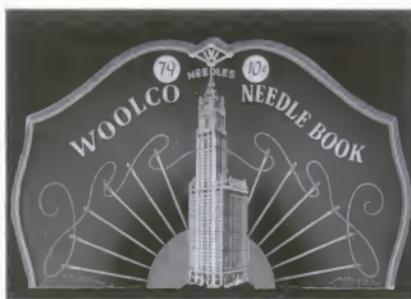
were located on twenty-four, but Woolworth carved out a special niche for himself, a suite and apartment on the fortieth floor – perhaps the world's first pied de terre.²⁵⁴

Perhaps the greatest feature of the Woolworth Building was the "lookout gallery" on the fifty-fourth floor. This public observation floor was instantly popular. Guests would pay fifty cents to ride an elevator to the fiftieth floor and its "tearoom." From there visitors could climb a spiral stairway or ascend in a small shuttle elevator to the exterior viewing balcony. From there one could stroll among the world's highest buttresses, gaze down to copper roofs, and take in the world's busiest harbor and the ocean beyond. A visit there must have been a spectacular experience, an adventure no longer available. During the early days of World War II this venue was closed for fear that foreign agents could monitor ship movements in the harbor.²⁵⁵

To many the Woolworth Building's lobby is considered its piece de resistance. Entering at 233 Broadway, the grandest of the five entrances into the building, brings the visitor directly into its splendid Gothic lobby. This secular space in the "Cathedral" functions as both formal lobby and shopping arcade. It thrusts three stories high and boasts walls and staircases slathered with marble. Second floor balconies allow for closer inspection of two large wall frescoes titled "Commerce" and "Labor." The vaulted ceiling, of brilliant glass mosaics and jewel-like tiles, positively twinkles; its viewing is a true ethereal experience.



(187) An aptly framed vignette of the Woolworth's top "Above the Clouds."



(188) The family seamstress was introduced to the Woolworth Building each time sewing was required. Corporate promotion, through architecture, was effective.

As in so many European cathedrals, church hierarchy, royalty, and various benefactors' images were depicted where most clergy and parishioners could view them. So too in the Woolworth Building's lobby. Bas reliefs of prominent contributors to the erection of the skyscraper can be seen and include Louis Horowitz, its builder, Lewis Pierson, President of the Irving Bank and first tenant, and Edward Hogan, the rental agent. Further portrayed were Gunvald Aus, the steel engineer measuring a girder, architect Cass Gilbert clutches a model of the building, and merchant Frank Woolworth happily counting coins.

At the 1915 Panama-Pacific Exposition in San Francisco, the recently completed Woolworth Building received a gold medal and the distinction of the "most beautiful building in all the world erected to commerce." Today, the Woolworth Building continues to receive the highest accolades and is often referred to as the most distinguished of all skyscrapers.

The Woolworth Building offers these superlatives:

- once world's tallest building, a title it held for seventeen years
- daily population of 15,000
- building weight: 223,000 tons, including twenty-seven tons of bronze and iron hardware, 7,500 tons of terra-cotta, 28,000 tons of hollow tile (flooring & fireproofing), and a whopping 24,000 tons of steel
- utilizes 400,000 blocks of terra-cotta composed of over 500 various shapes
- floor area: fifteen acres or approximately 653,400 square feet
- total area of building is 13,200,000 cubic feet
- eighty-seven miles of electric wiring
- twelve miles of marble wainscoting
- 3,000 windows
- 17-million bricks
- 26 high-speed passenger elevators, each equipped with a telephone
- original cost was \$13.5 million
- designed to withstand a 200 mph wind (hurricane force)
- electrical generators supply enough power to supply a city of 50,000
- storage bunkers in basement stored 2,000 tons of coal
- 150,000 pieces of mail are delivered *daily*
- "Over 317 tons of Harrison's Paint Products used to paint and protect, this immense steel structure."²⁵⁶

Municipal Building

New York City

McKim, Mead & White, New York City

1913

After the consolidation of greater New York City in 1898 and the four outer boroughs having been brought into the fold, it was quickly apparent that more municipal office space would be required. The swelling of existing departments and the increase in the numbers of others taxed the system. Both office holders and office workers, managers, general staff and clerks had to be centrally housed and situated near to the City Hall, the Civic Center, the courts, and the mass transit node at the confluence of the Brooklyn Bridge.

In 1908, an architectural competition, sponsored by the City of New York, was held to ascertain which design could best serve the city. Architectural luminaries such as Carrere & Hastings, Howells & Stokes, and Clinton & Russell submitted entries. But that judged superior was the offering by McKim, Mead & White for a colossal skyscraper that melded Beaux-Arts pomp with Neo-Classical bravura.

The planned site straddled Chambers Street, anchored the approach to the Brooklyn Bridge, and required the demolition of the noted Staats-Zeitung Building²⁵⁷. The new Municipal Building was under construction for over five years. Foundation caissons pushed down 130 feet, and only when the structure finally emerged from the depths could New Yorkers comprehend its true size. It measured 450 feet wide and 300 feet deep in a flattened U shape. It reared up over Chambers Street and produced a giant archway through which thousands of autos passed daily.²⁵⁸ The structure's footprint forms a delightful series of discretely defined spaces executed in the best tradition of urban place-making.

The \$12 million Municipal Building was topped out at thirty-four stories, 580 feet over Manhattan. It is the home to over 7,000 office workers and is the business destination of thousands more. Its weight was calculated at 165,000 tons all of which were supported by 106 pneumatic caissons. The skyscraper is composed of a twenty-four-story office block that is surmounted by a ten-story tower embellished with stone domes, obelisks, urns, colonnades, and balusters. The structure's base is wrapped by fifty-two, three-story-tall, Corinthian columns and pilasters. Echoed at the twenty-fourth-floor these colonnades strongly suggest an iconic and imperial image. The arcaded south entry features a spectacular Guastavino tile ceiling and a splendid way to enter the subway station below. At the tower's apex stands *Civic Fame*, a gilded statue by sculptor Adolf Alexander Weiman is also responsible for the sculpted reliefs on the building's lower floors.

Much praise is reserved for the Municipal Building's architect, not so much for the firm McKim, Mead & White, but for the form giver himself, William Mitchell Kendall (1856-1941). Boston born, he was educated at Harvard University and graduated in 1876. He studied architecture at the Massachusetts Institute of Technology, and after two years there, as was customary, he traveled to Europe. Kendall was responsible for dozens of commissions worldwide, but among those in New York were Madison Square Garden, Morgan Library, main Post Office, Savoy Plaza Hotel, Library at Columbia University, Knickerbocker Trust Company, and the much loved Washington Arch in Greenwich Village.

William Mitchell Kendall understood best in 1908 what the City of New York was searching for. The city yearned not just for 648,000 square feet of office space, which it got, but for something far greater. With its new building the city wished to convey virtues, virtues of both government and the governed--concepts like permanence, prominence, and prosperity. Sponsors felt that architecture could indeed communicate abstract ideals that would eventually enrich and improve the lives of its citizens. Kendall gave to New York City a spectacular structure, one that recalled the civics of Greece and Rome, and a structure that looked to the future and modernity. The Municipal Building was topped with a replica of the Temple of Lysicrates, an ancient and heroic form. At the building's base are an auto archway and a bustling subway station. Incongruities here make for fascinating architecture.

Kendall's design was a thoughtful and altogether intelligent response to a challenging site, indeed an outstanding civic response to context. His building still has a commanding, even regal, presence in the Civic Center, as well it should.

Union Central Life Insurance Building

Cincinnati

Cass Gilbert, New York City

Garber and Woodward, Cincinnati

1913



(189) Union Central Life Insurance Building, an altogether pleasing form.

In 1867, two Methodist bishops and two soap manufacturers gathered in Cincinnati to found what was to become the Union Central Life Insurance Company. Union Central was the first domestic life insurance company chartered in Ohio and today it remains one of this country's oldest. In less than five decades this company would forever change the face of Cincinnati.

For years Union Central corporate officers advocated the construction of a headquarters building in downtown Cincinnati. In 1911, a devastating fire leveled buildings on a parcel of land located on the southwest corner of Fourth and Vine Streets, a site the company had been eyeing. On this parcel stood the Cincinnati Chamber of Commerce (Henry Hobson Richardson, 1888), a landmark rendered beyond rescue. In its place was envisioned the great skyscraper yet to come.

The Union Central Life Insurance Company took title to that sought after parcel on July 15, 1911. A nationwide competition was sponsored by Union Central in order to select the most appropriate structure. Some twenty-one competitors responded and only one was deemed the winner – Cass Gilbert of New York City. To assist the New Yorkers was the Cincinnati firm of Garber & Woodward. Interestingly, Cass Gilbert was simultaneously involved with designing New York City's Woolworth Building (1913), a tower then destined to be the world's tallest.

Construction quickly followed the clearing of the parcel. A permit to erect the tallest building in Cincinnati was obtained on October 11, 1911, and ground was broken for the project on February 22, 1912. After only 14 months of construction, on May 1, 1913, the great building was completed. In July of that year, the Company moved all of its Cincinnati operations onto floors eleven through eighteen; some 500 employees were accommodated by the move and included those in the executive, insurance, financial, medical, agency, actuarial, auditing, statistical and legal departments. The Cincinnati Chamber of Commerce, displaced by the fire of 1911, did relocate to the new skyscraper's second and third floors. The Central Trust Bank occupied the first floor. The total cost of the Union Central skyscraper was \$3.5 million, a small fortune in "1913 dollars."

Proponents of the new office tower, which of course included life insurance officials, were quick to point out that this skyscraper was the tallest office building west of New York City. They delighted in the fact that their home office, and Cincinnati's newest landmark, stood thirty-eight stories, 495 feet tall. Additional height statistics are as follows: the skyscraper measures 535 feet from the basement to the top of the lantern and tops-out at 1,037 feet above sea level.

No longer the tallest structure there, but still a reigning landmark on Cincinnati's skyline, the Union Central Life Insurance Building's distinctive profile can be seen for miles. White marble and glass make up its exterior. A heavily rusticated three-story-tall base supports the tower above. A copper-clad temple, topped by a pyramidal cap and aviation lantern, dramatically brings to termination the upward thrust of repetitive office floors. It is clear to some observers though that the columned and pyramidal summit was modeled after artistic representations of one of the Seven Wonders of the Ancient World, the Tomb of Mausolus at Halicarnassus, constructed in 350 B.C.E.

Shortly after the tower's opening, real estate advertisements claimed that "the building is fireproof and contains every known modern provision for the safety and comfort of its tenants, including an up-to-date emergency hospital." In 1927, a Renaissance-inspired annex was completed adjacent to the original. It was planned at twenty-nine floors, 416 feet tall and was to provide space for future growth. The annex's size was considerably scaled back, and only an eight-story structure was completed. Again, the architects were Garber and Woodward.

In 1964, the Union Central Life Insurance Company moved out of its downtown Cincinnati headquarters, the company's home for over fifty years, to a nondescript suburban office structure.

Dime Bank Building

Detroit

D. H. Burnham, Chicago

1913

The Dime Bank Building was an important addition to the Detroit skyline, and when completed it ranked as the city's tallest. Standing twenty-three floors, 285 feet, this skyscraper dominated its neighborhood in much the way it is dominated by loftier buildings today. This neo-classical office building rises from a three-story plinth. In plan, and placed atop, is a twenty-story U shaped shaft. Hundreds of offices were organized around a light court that opens onto the street. Skyscrapers designed using this formula for organizing space were especially characteristic of pre-World War I types.

The Dime Bank Building is remarkably similar to the Burnham firm's later design for the Equitable Building (1915) in New York City. Manhattan's skyscraper was perhaps conceived, or already "on the boards" at the same time that Detroit's was nearing completion. Aesthetic borrowing were certainly possible since clients, although quite distant, shared similar values and needs. One firm, a bank, and the other an insurance company, were precisely the types of clients Burnham sought, and Burnham was precisely the type of architectural firm that businesses called upon.

L.C. Smith Building

Seattle

Gaggin & Gaggin, Syracuse, New York

1914

Upon completion Seattle's L.C. Smith Building ranked as the world's fifth tallest skyscraper. At forty-two floors, 500 feet, it was eclipsed by only New York's Woolworth, Metropolitan Life, and Singer Buildings, and by the Philadelphia City Hall. This gangly office building was constructed as the home office for the L.C. Smith Typewriter Company, founded in 1886 by inventor and industrialist Lyman Cornelius Smith (1834-1910). For decidedly business reasons, and in homage to his father's accomplishments, Burns Lyman Smith ordered this skyscraper built and named accordingly.

What was originally planned as a fourteen story structure by father L.C. Smith was eventually ratcheted upward at the insistence of son Burns. Burns correctly reasoned that the powerful imagery and corporate identity brought to the L.C. Smith Typewriter Company was inescapable and priceless. In the year of his father's death, Burns Lyman Smith commanded the start of construction.

The building's design was the work of the Syracuse, New York, firm of Gaggin & Gaggin. Brothers Thomas Walker Gaggin (1871-1945) and Edwin H. Gaggin, both graduates of Syracuse University, drew the plans for what was their largest commission. They clearly were aware of the unabashed historicism of other skyscraper record-holders such as the Gothic-inspired Woolworth, the Italian-Renaissance Metropolitan Life, and the Beaux Arts Singer and Philadelphia City Hall. They called for a departure from the expected. Some neo-classical remnants would be found on the new L.C. Smith Building, but overall the structure would defy convention. The brothers Gaggin were also no doubt aware of Chicago's just completed Montgomery Ward Warehouse (Schmidt, Garden and Martin, 1908) – an architectural cousin – and other more "industrial" looking structures. Stripped of the extraneous these manufacturing facilities offered a reprieve from the

mundane. Despite its top-heavy pyramidal cap and its prominent cornice, Seattle's L.C. Smith Building would offer the world something quite radical. Here was a machine, a utilitarian people-container, a metaphor for the very *machine* this company sold; here was conceived an upended warehouse, a building conceived in direct response to current technology, a building like, and for, the typewriter.



(190) The L.C. Smith Building rises over Seattle to become the tallest west of the Mississippi River.

(191) L.C. Smith Building: The tower that typewriters built.

Gaggin & Gaggin's exterior scheme for the L.C. Smith Building called for white terra-cotta and glass setback tower. Its 2,314 windows comprised an astonishing sixty-five percent of its surface and were wrapped in bronze, a nod to the machine aesthetic and modernity. Its widows marched along its walls without respite. No rest, no rhythm, no pier differentiation, no surface modulation here. The fenestration was tight, its "window fabric" pulled taut around the building's corners, each glass bay equidistant from another. Revolutionary! Without rival! The building was designed as a five-sided box from floors one to twenty-one, with its square tower (measuring fifty-five by forty-four feet) and cap (standing seventy feet) housing the remaining twenty-one floors. A more powerful expression could well have been had if the cornice and pyramidal top were not included in the final design. Had that decision been made for their exclusion, the entire composition would have ranked far more potent, one without nuances, and a design statement that would have propelled this skyscraper to the forefront of comparatively new and radical skyscraper language. Perhaps the *American* entries to the 1922 *Chicago Tribune Design*

Competition would have been more daring and more in line with the European avant-garde offerings had a "machine aesthetic" prototype actually been built.²⁵⁹ Surely, these chunky add-ons – the pyramidal cap and overbearing cornice – contributed nothing to Seattle's progressive self image and nothing to the skyscraper as a tool of inquiry into modern architecture. Its *height* is what made this building famous.

The "Tallest Building West of the Mississippi River", as it was billed, was under construction for some three years; Eleven months were required to complete the L.C. Smith Building's foundation whose dead load approximated 32,650 tons. The skyscraper rested upon 1,276 concrete friction piles driven by sixty tons of pressure to a depth of fifty feet. The weight of the Pittsburgh-produced steel used in the building's frame equaled 4,732 tons; manufactured by The American Bridge Company, it was transported to the site by 164 railroad cars.

At its official opening on July 3, 1914, over 4,000 guests visited the new skyscraper and its thirty-fifth floor observatory. Here was Seattle's Eiffel Tower, an instantly recognizable landmark that began as, and could have been, a nondescript fourteen-story building but for the vision of a courageous entrepreneur named Burns Lyman Smith. The public was impressed by its lobby walls of Alaskan marble, Mexican onyx, and its rich use of hardwoods. They were further delighted by the building's eight electric elevators furnished by the Otis Elevator Company. These were transparent types walled with glass and trimmed with polished copper and brass.

As night enveloped the city the L.C. Smith Building's summit became an instant focal point. Its many-dormered pyramidal cap, topped by a sixteen-sided, eight-foot wide glass sphere and aviation beacon, flicked on. Just below, an exterior observation promenade surrounding the pyramidal base was also lighted. Originally this "sidewalk in the sky" was graced by oversized and elaborate light standards and still provides a romantic view of the city and the mountain ranges in the distance. This structure remained Seattle's tallest building until 1969 when it was surpassed by the fifty-story, 609-foot tall, Seattle First National Bank Building (NBBJ Architects).

The L.C. Smith Building remains a landmark of the first order, a pioneering minimalist high-rise, despite some Renaissance throwbacks. It is too often overlooked in the development of the American skyscraper.

Federal Realty Building

Oakland

Benjamin Geer McDougall, San Francisco

1914

Oakland's most distinctive skyscraper remains the stunning Federal Realty Building, a landmark recently, and understandably, renamed the Cathedral Building. This skyscraper is yet another of perhaps dozens of flatiron-shaped buildings across America most of which are much shorter and far less compelling. Constructed as the Oakland office for the Federal Realty Company, the skyscraper stands thirteen floors, 140 feet high. It is dressed with white terra-cotta and is wrapped in a jacket of neo-Gothic details which coalesce into a wonderfully romantic and flamboyant work of architecture.

The Federal Realty Building is a contemporary of the "New York Triumvirate", the Gothic-inspired terra-cotta-clad queens known as the West Street Building (1907), Liberty Tower

(1909), and the Woolworth Building (1913). Of course the Federal Realty Building's three-sided shape also recalls the form of Manhattan's more celebrated Flatiron Building (1902); the Oakland counterpart has a chiseled and stepped profile that distinguishes itself from the Flatiron with a form more animated than its decidedly austere cousin in Manhattan. Still, it performs much the same urban function; the Federal Realty knifes the intersection of Broadway and Telegraph while the Flatiron slices through Broadway and Fifth.

San Francisco architect Benjamin Geer McDougall (1865-1937) drew the plans for this skyscraper after opening his own architecture firm in 1906. It is suspected that he based his design upon the elegant lines offered by the chateaux of the French countryside, and perhaps more specifically S. Chapelle in Paris, a palace chapel completed in 1248 by S. Louis. Nonetheless, this graduate of the California School of Design and student of his architect father, comfortably worked Gothic forms into an altogether adept interpretation of European ecclesiastical or palace architecture into an American twentieth century office tower.



(192) Federal Realty Building

Adams Express Building

New York City

Francis H. Kimball, New York City

1914

What began in 1839 as a small parcel delivery firm known as the Adams Express Company, would, by 1850, merge with others to form the American Express Company. Henry Wells (1805-1878) and William Fargo (1818-1881), the president and company secretary respectively, created what was to become one of the country's largest shipping and financial services firms. An American Express subsidiary founded in 1852, the Wells Fargo Company, conducted express delivery business between the coasts. In 1874, American Express located itself at Sixty-Five Broadway in Manhattan's financial district; it would remain at this address for more than a century.

By 1910, the American (Adams) Express Company decided that the current quarters at Sixty-Five Broadway were inadequate. Consequently, in 1911, noted New York architect Francis H. Kimball was called upon to submit drawings for a grand and giant skyscraper to be constructed on the northwest corner of Broadway and Exchange Alley. His response was an important addition to the Manhattan skyline, although it is not considered to be one of his greatest efforts.

The American Express Building, often referred to as the Adams Express Building until as late as 1931, was deemed one of the largest office building's anywhere; upon completion it was New York's 9th tallest. This skyscraper rises without the customary setbacks, offers an unrelenting fenestration pattern, and is topped by a rather overbearing cornice. It stands thirty-two floors, 424 feet tall and took just over two years to complete. In plan the building forms a U shape, the open end faces south permitting sunlight and fresh air to reach most of its over 1000 offices. The building contains a whopping 3,200 windows, and it once easily dominated lower Broadway.

In 1985, the American Express Company removed to the confines of the World Financial Center, some ten blocks away. Now located at Three World Financial Center,²⁶⁰ the company's home is a 53-story, 739-foot-tall tower. Again the Company makes a distinctive profile on the skyline, but this time breaking with tradition by forfeiting its old *flat-topped* building for a new *pyramid-capped* one.

Oakland City Hall

Oakland

Palmer and Hornbostle, Pittsburgh

1914

The Oakland City Hall is an unusual architectural offering indeed. A series of stacked boxes topped with a Neo-Baroque doodad-with-clock, though not overly complimentary, is but one way to describe this building. As the result of a design competition sponsored by the city of Oakland, it was this Beaux-Arts extravaganza that was termed best entry. One of the first skyscraper city halls, ground was broken in 1911, it stands nineteen floors and rises 319 feet.

City Hall fills an entire block in downtown Oakland and it contains 165,000 square feet of floor space. Its exterior is composed of granite and terra-cotta. Since it is located in an earthquake-prone area the City Hall underwent a three-year seismic upgrade in the early

1990's. Much foundation work was undertaken and over 1,900 tons of steel was inserted into the building including new steel trusses and braces for the clock tower's strengthening.

Custom House Tower

Boston

Peabody and Stearns, Boston

1915

In 1847, after ten years of construction, a United States Custom House was completed in Boston. The building was designed by Boston architect, Ammi Burnham Young (1798-1874) and it was an instant Boston landmark. Still standing, this Greek-inspired temple is as formal and chaste as any in America. It displays thirty-two Doric columns, each weighing forty-two tons, that march around its perimeter. The Custom House is faced with gray granite and it is supported by oak piles which vary from twelve to fifteen feet in length. Atop the crossing of its two roofs rises a shallow sky-lit dome, underneath which is a rotunda. This federal building served Boston nobly for sixty-six years, and then came Peabody and Stearns.



(193) The United States Custom House before the 1915 addition.



(194) For five decades the Custom House Tower was Boston's tallest building.

A government study determined that a new custom house was indeed in order. After much controversy a location was favored at the intersection of India and State Streets, in the heart of the Custom House District. And, after even more controversy, a decision was made to locate the new building above the existing structure, hence no demolition, no site acquisition, and familiarity was appeased.

Robert Swain Peabody (1845-1917) and John Goddard Stearns, Jr. (1843-1917) formed a prominent and prolific architectural partnership in 1870 that was to last until 1917. Peabody and Stearns was called upon to submit plans for the new custom house. The resulting design was bold, innovative and thoroughly urban. Without damaging Young's exquisite facades, Peabody and Stearns called for a great tower to thrust rocket-like from the core of its ancient base. In April of 1915, after two years of construction, that tower was completed. The Boston Custom House was Peabody and Stearns' last major commission.

Once Boston's tallest skyscraper, the Custom House still looms above the downtown waterfront and the Renaissance-like square into which it was placed. This "square" is formed by the convergence of five streets and the various buildings that help to make it a special place, an urban enclosure complete with a 20th-century campanile. The tower stands thirty-two floors, 496 feet tall and its presence is profound. Like its 1847 base, the skyscraper too is sheathed with gray granite. The sky-lit dome, once a prominent feature of the Young-designed building, was encased in stone and preserved. The office tower, standing above, measures sixty-five by seventy-five feet with a batter on each face of the shaft of thirteen inches. Paired engaged Ionic columns span floors seventeen through nineteen and at the twenty-third floor are positioned carved winged beasts and scrolls. A small observation balcony at the twenty-seventh floor rings the tower, and a four-faced clock is lighted nightly. A steeply pitched pyramidal cap tops the tower.

The difficult architectural task of the Boston Custom House addition was admirably resolved by Peabody and Stearns. Their novel approach brought to full resolution all of the problems usually associated with a project of this type. The resulting building is respectful of its site and historical context. It is a finely proportioned and gentle skyscraper.

Equitable Building

New York City

Ernest Robert Graham, Chicago

1915

This skyscraper represents much, but foremost the culmination of efforts to build tall by three powerful and influential men, Thomas Coleman du Pont, Ernest Robert Graham, and Louis J. Horowitz. These men, investor, architect, and contractor, joined to erect the then biggest office building anywhere. It was as controversial as it was large, and yet the Equitable Building stands as proudly, as magisterial, today as it did upon its completion. Here is one of the truly great skyscrapers of this century.

The lower Manhattan block bounded by Broadway, Cedar, Pine, and Nassau streets was the site of an earlier Equitable Life Assurance Building (Gilman and Kendall, with Post, 1870), the company's first home office building. As a result of a catastrophic fire in 1912, the 1870-vintage building at 120 Broadway was swept away and a replacement was foremost in the minds of Equitable executives. The Thompson-Starret Company, a major and nationwide-based construction company, was hired by Equitable to demolish the

remnants and clear the site of their charred office building. Louis J. Horowitz, assistant to the president of Thompson-Starret approached financier and president of the du Pont Company, Thomas Coleman du Pont (1863-1930). He was a tycoon who, at an early age, became successful in the coal and iron business and whose family ranked as one of the wealthiest in America. Thomas du Pont anted up \$10 million and became the sole financier for the Equitable office project. Interestingly, Thomas du Pont would also go on to finance the construction of the Empire State Building in 1929.

Louis J. Horowitz, the Thompson-Starret executive, was born in Poland and arrived in the United States about 1892. He dabbled in real estate trading and building development in Brooklyn eventually gravitating to Thompson-Starret. Horowitz, a major proponent of a giant skyscraper for 120 Broadway was a long-time associate and friend of du Pont's. Horowitz recalled that in 1912, "Du Pont was fascinated by the idea of owning a gigantic building in New York . . ." Each was more than committed to raising a monument. Horowitz then contacted architect Graham.

The third major player in this skyscraper trilogy is the architect, Ernest Robert Graham (1868-1936). He studied architecture at Coe College in Cedar Rapids, Iowa, and at Notre Dame University in South Bend, Indiana. Graham began his career as a draftsman in the office of Burnham and Root in Chicago. Upon Daniel Burnham's death in 1912, Graham, then a senior architect, assumed leadership of the successor firm Graham, Anderson, Probst & White. The Equitable project was in the wings and Horowitz promptly hired the Chicagoan. Horowitz described the architect thusly:

In those days Graham's hair was red and he wore a wisp of red mustache. He always carried his head to one side and as he waddled swiftly, sharp-eyed, he reminded me of an alert duck. He was almost always hustling, and much of his activity had to do with his efforts to make some contractor shade his price to a client of Ernest Graham. He loved to beat contractors with their own kind of sharpness. It was a game with him; indeed, he delighted to skin their eye teeth by day and then skin them again at night as he gathered them around a poker table.²⁶¹

On June 10th, 1914 construction began on the Equitable Building. Its footprint measured 167 feet on Broadway, 152 feet on Nassau, 304 feet on Pine and a whopping 312 feet on Cedar Street – slightly under an acre. Steel columns, girders and beams arrived at the crowded site in the heart of Manhattan's financial district with the strictest regularity. Soon to follow were hundreds of tons of white granite and marble, brick, terra cotta, piping, glazing, cast-iron radiators, and a myriad other materials. The building began to rise and to eventually form an H in plan with exterior courts on its narrow ends – Broadway and Nassau Street.



(195) This is one of the tallest buildings never built. If completed in 1908 the Equitable Life Assurance Company would have been owner of the world's tallest building. The Tallest Skyscraper, anon. author, *The Independent*, Vol. LXV, New York, Thursday, July 9th, 1908, No. 3110, p. 113.

(196) In 1915 the giant and controversial Equitable Building rose between the Trinity (Francis Hatch Kimball, 1905) and U.S. Realty Building (Francis Hatch Kimball, 1907) on the left and the American Surety Building (Bruce Price, 1894) on the right. The nine-story United Bank Building (Peabody & Stearns, 1881) cowers on the lower right with the steeple of Trinity Church (Richard Upjohn, 1846) keeping vigil.

On May 1st, 1915 the Equitable Building was pronounced completed. After only ten months of construction the World's Largest Office Building admitted its first tenants. This skyscraper stood thirty-eight floors, 486 feet tall, and it contained 1.2 million square feet of rentable space – more than any other, then. In its first year the skyscraper returned \$3 million to du Pont in the form of rents. Not long after opening the Equitable was assessed at \$25 million ranking this New York City's *most valuable* building. In order of assessed value in 1919 the other contenders were:²⁶²

Pennsylvania Railroad Terminal	\$ 14,830,000
Mutual Life Building	\$ 9,500,000
Woolworth Building	\$ 9,500,000
Biltmore Hotel	\$ 8,700,000
Plaza Hotel	\$ 8,100,000
Singer Building	\$ 7,000,000
Macy's Department Store	\$ 6,900,000
Gimbels Department Store	\$ 6,630,000
City Investing Building	\$ 6,625,000

Western Union Building	\$ 6,500,000
Adams Express Building	\$ 6,500,000
Stern's Department Store	\$ 6,000,000
U.S. Realty Building	\$ 6,000,000
Banker's Trust Building	\$ 5,800,000

Although du Pont's property, the Equitable Life Assurance Company of New York was the major tenant of the skyscraper – "Equitable" was prominently carved on the building's front. Equitable occupied 125,000 square feet of space, and yet was only one of dozens of tenants. When fully occupied the Equitable Building housed some 20,000 people and was the destination of another 50,000 visitors *per day*. Soon after opening, the skyscraper's top floor came to host the prestigious Banker's Club, a private penthouse restaurant and escape for venture capitalists, corporate titans, and tycoons.

The Equitable Building's inside is spellbinding. A main corridor serves as more than just a connector of streets, it is a great promenade. A barrel vault presides over white marble floors and walls, and it governs a space where the attention to architectural detail is impeccable. This interior thoroughfare connects the skyscraper's two giant entrances on Broadway and on Nassau Street. Elevator lobbies branch from the "grand street" and accommodate forty-eight cabs, each featuring stunning bronze doors.

The exterior of the Equitable Building is vintage Ernest Graham, and of course Graham, Anderson, Probst & White. This neo-Classical inspired skyscraper is jacketed with light gray granite. Its facades are replete with carved granite fruit swags, Corinthian pilasters, eagles, and numerous reliving cornices. The building's massing is especially powerful when experienced on the structure's widest sides, albeit in shadow. The architects eschewed rooftop domes, spires, pinnacles, bell towers and any such contemporary extravagances. The Equitable has a flat roof. Its walls climb without fussy setbacks, they rise sheer to the sky in a truly modern manner.

Here is a skyscraper of the first order, a building that stands as an icon – richly representative of the period in which it was built. It still celebrates itself architecturally and economically, exactly as it was destined to. The Equitable helps to make New York City what it is, it contributes to the legend, the mystery and bravado of Gotham, and no city can expect more. This skyscraper stood as a proud and soaring cliff-like shape, unmistakable on the 1915 skyline, yet today, it postures behind others. Here is an architectural and economic success story. But perhaps most important to some was, and is, the Equitable Building's ability to perform as an economic engine and to provide a strong rate of return based on investment.

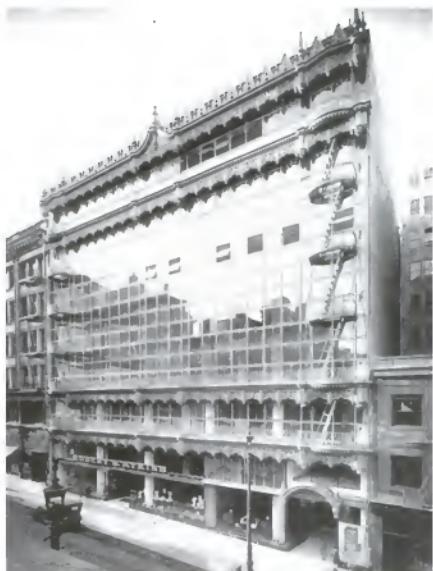
Recently restored, Hallidie remains an extraordinary prescient building, at once decorative and austere.²⁶³

Hallidie Building

San Francisco
Willis Polk, San Francisco
1917

The Hallidie Building is a quiet skyscraper that loudly announces its rightful position in the history of skyscraper technology. Its size and height are humble but nowhere in 1917 did a building wall quite like the Hallidie's exist. In America, the concept of true building

transparency was defined here. Named after the inventor of the cable car, London-born Andrew Smith Hallidie (1836-1900), this eight story office building has captured the hearts of San Franciscans as did Hallidie's clanking cars. Though a landmark, the Hallidie Building is seemingly, and inexplicably, little known and little appreciated outside the city, yet its status is nothing short than monumental: it possesses the *first true glass curtain wall in the country*.



(197) Hallidie Building. Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox, and Tilden Foundations. Photographer: Gabriel Moulin

The Hallidie Building has a concrete skeleton: hexagonal reinforced columns on twenty-foot centers with floors being eighteen-inch-thick hollow-ribbed slabs. Projecting three feet from these concrete floors are metal brackets that support metal mullions and hundreds of pieces of plate glass. Thus, the "window wall" is completely independent of the building structure itself. Window panes pivot outward for access to fresh air and ease of cleaning. The Hallidie's street façade is overwhelmingly glass, a superbly modern response in a modern age for a modern metropolis. Included in the building's original design, and found at building top and on the fire escapes, is neo-Gothic decoration that does nothing but mar what also could have been an exemplar of minimalist restraint.

The architect of the Hallidie Building was Willis Jefferson Polk (1867-1924). He was born in Frankfort, Kentucky, the son of an architect, and in 1881, he and his family moved to San Francisco. Polk studied architecture in Europe and was apprenticed in a number of firms – one being that of Daniel H. Burnham in Chicago. In 1904, Polk established Willis Polk & Company. Despite his many commissions the Hallidie Building remains his finest, and boldest, opus.

Bush Terminal Building

New York City

Helmle & Corbett, New York City

1918

This elegant and too often overlooked skyscraper in mid-town Manhattan was the world headquarters of the Bush Terminal Company. In 1890, Irving T. Bush (1869-1948) began to assemble property and construct a massive industrial, warehousing, and transportation complex in northwest Brooklyn. Eventually this venture would encompass two hundred acres, control fifty thousand railroad freight cars and eighteen piers, and at its peak employee 25,000. This vast enterprise required much office space and in 1915 planning commenced for an important office building.

A parcel near Times Square, measuring fifty by two hundred feet, was acquired and it was announced it would support the skyscraper headquarters that Irving T. Bush required. Architects, too, were assembled, and construction proceeded in 1917.

Upon completion the public, and the critics, found the Bush Terminal Building phenomenal. The design chosen transcended those of most business towers; it was an absolutely delightful form in space. The skyscraper emerged thinly, a mid-block slab inserted into a narrow slot between buildings completed a generation earlier. The building's skin of brick and terra-cotta seemed stretched tightly over its steel frame, there were no wasted lines. Yet, Helmle & Corbett secured the building's corners at the twenty second floor with terra-cotta wrapped lanterns, a charming touch on an otherwise formal composition.

The Bush is tall too, thirty floors, four hundred-nineteen feet high – the tallest for blocks. From the sidewalk it climbs, giving the eye no relief from its race to the sky until a twenty-first floor spandrel course. Abruptly, the tower is twice tucked in resulting in an eight-sided tower, the very top true to the meaning of penthouse.

Inside, the handling of space was masterful. Because of its thinness special wind bracing was employed. The structure was especially braced east to west, its frame a giant trussed box. Weaving through and between the beams and girders were six passenger elevators and two freight elevators and the usual compliment of offices by the hundreds. The first floor was a rectangular floor, further up the floors were pinched in the middle, narrowed to harvest sunlight and fresh air for inside offices.

The architects, Helmle & Corbett, captured the *spirit* of their project with a nod to the neo-Gothic. The Bush is unquestionably a vertical mass, dictated so by the confines of a paltry street front site. Architects Helmle & Corbett continued the New York tradition of the neo-Gothic, that which was employed by Cass Gilbert at the West Street (1907) and Woolworth (1913) buildings, and by countless others sprinkled through Manhattan.

The "Bush Tower" or the "Bush Terminal Sales Building", as it was sometimes called, also served Manhattan as a merchandise mart. The following, from a contemporary guide, reveals as much:

A magnificent 30-story structure, specially designed for the convenience of buyers visiting New York. It holds permanent displays of merchandise from leading American and foreign manufacturers and is the home to the Buyer's Club.

The architectural firm responsible for the accolades was that of Helmle & Corbett, of New York City. Ohio-born Frank J. Helmle (1869-1929) migrated to New York to study

architecture and complete his architectural training. His career began about 1900, in Brooklyn, and for twelve years he practiced alone.

Harvey Wiley Corbett (1873-1954) studied at the University of California, Berkeley and at the Ecole des Beaux-Arts in Paris. In 1901, he moved to New York eventually finding Helmle in 1912. After the completion of the Bush Terminal Building the firm of Helmle & Corbett relocated to the top two floors, an appropriate eerie for two leading proponents of the "skyscraper" as *the* ultimate urban form.

Callahan Bank Building

Dayton

architect unknown

1919

In 1892 the Callahan Bank moved into its new office building in downtown Dayton, Ohio. The new structure consisted of only the first five floors of what later became its eight-story home in 1919. This was the home office of this southwestern-Ohio bank, one of the tallest buildings in the city when completed.

The original building was a robust Romanesque pile rising above a modest footprint. Its facades were of stone and brick, the very materials that defined its arches and bay windows. Yet, its architect refused to treat the building's main entrance with any type of pomp, windows and entrance arches were indistinguishable. The Callahan Bank Building's design was the antithesis of what an American skyscraper should be according to Louis Sullivan and those espousing the virtues of the Chicago School. The building terminated with a complex dormered roof featuring a corner tower, an appendage more European than American, more medieval than modern. Here stood a building that in no respect could be considered modern. Its visual appeal, an attempt largely unsuccessful, was secondary to its thirst for height - a thirst some might judge unquenched and inconsequential at any rate.

The Callahan would have been a compelling piece of architecture if constructed in 1870 say, but by 1919, it was simply an anachronism. The Callahan's significance was that it was insignificant. Still, such buildings both short and tall filled America, and they deserve to be recorded. Once located on the northeast corner of Third and Main Streets, this building was razed in 1978.

Chapter Five

Eclecticism

and the Roaring Twenties

1920-1929

Last of the Romantics?

The Roaring Twenties was a mixed-up age of glitz and optimism, of frivolity and despair. The stock market was hot and so was the dancing of Josephine Baker and the bat of the "Sultan of Swat," Babe Ruth's apt moniker. Houdini, Lindbergh, Harold Lloyd, and King Tut were heroes. Louis Armstrong, Fats Waller, and George M. Cohen gave us golden sounds. There were flag pole sitters, dance marathons, and the Charleston but no one could legally down a whiskey or nurse a beer. Regularly scheduled airline service began, Valentino became a sheik, and conscientious homeowners purchased small plastic plugs to be inserted into wall outlets so that their electricity would not leak onto the floor.

This was the decade when the Scopes "Monkey Trial" convened in Dayton, Tennessee (a place with no skyscrapers) and when Wall Street (a place with lots of skyscrapers) was the home of titans, the financiers of tall buildings and more. William C. Durant (founder of General Motors), Jesse Livermore (stock market speculator worth \$100-million), Charles Mitchell (head of National City Bank), and speculators Michael Meehan and Thomas W. La Mont, were the gurus of "the Street." In Chicago Al Capone became synonymous with St. Valentine's Day, and in New York Al Jolson in *The Jazz Singer* proclaimed "you ain't seen nothing yet." How right he was.²⁶⁴

Chicago was a city that by 1925 towered over the Home Insurance, the Rookery, and the Reliance Buildings. These structures of a former generation could not be seen on the skyline and were considered quaint in an archaic sort of way. The Loop counted 163 skyscrapers, by some tallies, and was home to 300,000 workers each business day.²⁶⁵ Every twenty-four hours 20,000 street cars and 150,000 vehicles passed through the Loop. Pedestrian "trips" totaled 10,000,000. The skyscrapers were getting so tall that concerns surfaced regarding warning systems for aviators; any miscalculation over Chicago's nerve center could have been catastrophic. Chicago was a magnificent bedlam, perfect in so many ways.

By the mid-twenties aerial warning and navigational beacons were first positioned atop skyscrapers. Perhaps the most celebrated of the period was the huge beacon fixed to the top of the Hotel St. George in Brooklyn in 1928. This was a great revolving beam of 480-million candlepower visible for fifty miles. Its three-foot wide beam was angled at 45-degrees, a switch was turned on, and the light began to slowly rotate. The light is provided by a big electric arc with a temperature of some 4,700 degrees. One observer noted, "For a hundred feet in the path of the beam, as far as the naked eye could follow them, myriads of dust particles and cinders from the smoke of neighboring buildings twisted and turned and sparkled in the night wind like millions of tiny jewels."²⁶⁶

America's largest cities were indeed bright after dark even during the 1920's. The following was reported in 1929: "New York City Brightest Place in World at Night."²⁶⁷ Counted were 20,880 electric signs between the Battery and 135th Street; 1,309,918 lamps were required to make the signs glow. Much of the light was also generated by office windows and skyscraper flood lighting.

By the dawn of the Coolidge administration the skyscraper was accepted by the public as an element of the urban landscape just like the automobile, airplane, and electric toaster. During this decade one saw the select destruction of America's first generation of skyscrapers to be replaced by yet another; a taller, more technologically advanced, and visually robust generation appeared - but not until the end of the twenties. Were the new *modern* skyscrapers the symbols of a new age? Hardly. The renaissance, baroque, gothic, and other well-worn styles continued to be embraced by most skyscraper builders and designers and evidence of their infatuation was everywhere. Some exotic towers did emerge and satisfy the desire of some for romanticism and unbridled flamboyance: Medinah Club, Williamsburg Bank, American Insurance Union Citadel, and the Jewelers to cite a few. Conservatism countered with the General Motors, Cunard, Standard Oil and plenty of others.

The 1920's was also a decade of false starts with regard to the erection of super-tall skyscrapers. It was announced in June 1928 the Chicago Tower, a seventy-five story, 845 foot-tall office building, was earmarked to stand north of the Loop and be the world's tallest.²⁶⁸ The Palisades of New Jersey was to be home to an apartment building that would overlook all of Manhattan and be brilliantly lighted each night. It was to stand ninety floors, 1,000 feet.²⁶⁹ Topped by a giant cross, the Broadway Temple was planned as the "tallest building of all time" in 1924. This New York giant was designed by Donn Barber for a site on the corner of Broadway and 173rd Street. It was planned for some sixty stories but it was its gigantic pyramidal top and cross that would have lifted it above every other rooftop. Detroit's Book Tower was originally planned as an eighty-one story building in the mid-twenties. At 873 feet this too would have been the tallest anywhere but the building was scaled back. It was to stand "As a fitting monument exemplifying the confidence of Mr. J.B. Book, Jr. in Detroit."

Perhaps the most celebrated of all unexecuted 1920's projects was that of New York developer Edward Larkin (c.1887-1959). In 1927 he announced plans for a 110-story, 1,208-foot tall office building for Manhattan's west side. It was gigantic in scope and terribly banal. It was planned as a container of 18.6 million cubic feet that embraced fifty-nine elevators. Its site, 330 West 42nd Street, was eventually occupied by the iconic McGraw-Hill Building (Hood, Godley & Fouilhoux, 1931) standing at thirty-three floors, 464 feet.



(198) Towered cities please us then,

And the busy hum of men.

John Milton (1608-1674)

'L' Allegro' (1645) l. 117

Despite some failed attempts much was built throughout the nation during the 1920's. A 1929 survey conducted by the Thompson-Starrett Company, Inc., builders, revealed the following counts:²⁷⁰

- the country has more than 4,778 structures ten or more stories in height
- there are 377 buildings taller than twenty stories spread over thirty-six cities
- there are ten buildings over 500 feet tall
- six cities reported having more than 100 buildings over ten stories:

New York: 2,479

Chicago: 449

Los Angeles: 135

Detroit: 121

Philadelphia: 120

Boston: 104

By the late 1920's New York clearly possessed more skyscrapers than any place on earth. Consequently, it was no doubt the inspiration for the skyline portrayed in Fritz Lang's epochal opus, *Metropolis* of 1925. Moviegoers viewed a city and buildings that were extraordinary to some and frightening to others. The architecture depicted was phenomenal, as these were designs of a high order, works of the future but based on massings of the past.

Because of their numbers and ever growing heights, the skyscrapers of the 1920's filled-in the gaps of America's skylines with romance, wonder, and pride. And if the skyscraper, as a single entity or as a cluster, could be put to music let it be put to that 1924 masterpiece, *Rhapsody in Blue*, by George Gershwin. Those chiseled Manhattan towers were the models for each note, on each staff, on each page.

Skyscraper
by
Carl Sandburg

By day the skyscraper looms in the smoke and sun and
has a soul.

Prairie and valley, streets of the city, pour people into it
and they mingle among its twenty floors and are
poured out again back into the streets, prairies and valleys.

It is the men and women, boys and girls so poured in and
out all day that give the building a soul of dreams
and thoughts and memories.

(Dumped in the sea or fixed in a desert, who would care
for the building or speak its name or ask a policeman
the way to it?)

Elevators slide on their cables and tubes catch letters and
parcels and iron pipes carry gas and water in and
sewage out.

Wires climb with secrets, carry light and carry words,
and tell terrors and profits and loves-curses of men
grappling plans of business and questions of women
in plots of love.

Hour by hour the caissons reach down to the rock of the
earth and hold the building to a turning planet.

Hour by hour the girders play as ribs and reach out and
hold together the stone walls and floors.

Hour by hour the hand of the mason and the stuff of the
mortar clinch the pieces and parts to the shape an
architect voted.

Hour by hour the sun and the rain, the air and the rust,
and the press of time running into centuries, play on
the building inside and out and use it.

Men who sunk the pilings and mixed the mortar are laid
in graves where the wind whistles a wild song with-
out words

And so are men who strung the wires and fixed the pipes
and tubes and those who saw it rise floor by floor.

Souls of them all are here, even the hod carrier begging
at back doors hundreds of miles away and the brick-
layer who went to state's prison for shooting another
man while drunk.

(One man fell from a girder and broke his neck at the end
of a straight plunge-he is here-his soul has gone
into the stones of the building.)

On the office doors from tier to tier-hundreds of names
and each name standing for a face written across
with a dead child, a passionate lover, a driving
ambition for a million-dollar business or a lobster's
ease of life.

Behind the signs on the doors they work and the walls tell
nothing from room to room.

Ten-dollar-a-week stenographers take letters from corporation
officers, lawyers, efficiency engineers, and
tons of letters go bundled from the building to all
ends of the earth.

Smiles and tears of each office girl go into the soul of the
building just the same as the master-men who rule the building.

Hands of clocks turn to noon hours and each floor empties
its men and women who go away and eat and come
back to work.

Toward the end of the afternoon all work slackens and all
jobs go slower as the people feel day closing on
them.

One by one the floors are emptied....The uniformed
elevator men are gone. Pails clang...Scrubbers
work, talking in foreign tongues. Broom and water
and mop clean from the floors human dust and spit,
and machine grime of the day.

Spelled in electric fire on the roof are words telling miles
of houses and people where to buy a thing for
money. The sign speaks till midnight.

Darkness on the hallways. Voices echo. Silence holds.
...Watchmen walk slow from floor to floor and try
the doors. Revolvers bulge from their hip pockets.
...Steel safes stand in corners. Money is stacked in
them.

A young watchman leans at a window and sees the lights
of barges butting their way across a harbor, nets of
red and white lanterns in a railroad yard, and a span
of gloom splashed with lines of white and blurs of
crosses and clusters over the sleeping city.

By night the skyscraper looms in the smoke and the stars
and has a soul.

Carl Sandburg (1878-1967)

Skyscraper first published in *Chicago Poems*.

Sandburg, Carl. *Chicago Poems*. New York: Henry Holt and Company,
1916; Bartleby.com, 1999. www.bartleby.com/165/. 7/21/2006.

Cunard Building

New York City

Benjamin Wistar Morris, New York City

Carrere & Hastings, New York City

1921

The Cunard Building is one of the finest Renaissance-inspired office skyscrapers in America. Its richly appointed interiors, well-defined exterior detailing, and its handsome symmetrical composition, were praised at the Cunard Building's grand opening on May 1, 1921, and are still admired today. This was once the home to the Cunard Lines Company, the giant international steamship firm, and this building was *their* "cathedral of shipping."

In 1838 Sir Samuel Cunard (1787-1865) founded the company that bore his name. The great transatlantic steamship line would launch the *Mauritania* in 1907, and before long, her sister ship the *Aquitania*. These two steamships became world famous as they provided the quickest transport between America and Europe. Between the years 1900 and 1919 the Cunard Line maintained a fleet of thirty ships. Merging with the White Star Line in the 1920's, Cunard became the largest passenger ship company in the world. Other Cunard Line "floating palaces," the *Queen Mary* and the *Queen Elizabeth*, would come later and lend even more renown to this company.

Oregon-born architect, Benjamin Wistar Morris (1870-1944) graduated from New York City's Columbia University in 1894. He completed his architectural studies at Paris' Ecole des Beaux Arts then proceeded to enter the office of Carrere & Hastings. His training at the Ecole prepared him well for a firm, and a culture, which valued the European Renaissance and Baroque traditions.

The Cunard Building was the greatest and tallest building erected by any of the steamship companies, and it stands in what was once considered "Steamship Row." The "Row" neighborhood of lower Broadway was the center of ocean-going travel companies, steamship, and booking offices. The Cunard Lines Company once occupied five floors in this skyscraper, which is located opposite Bowling Green at Twenty-five Broadway. Its original cost was \$13.5 million.

Along Broadway three entrances lead to various parts of the building: the office tower to the south, a commercial space to the north, and in the middle is the entrance into a grand public room, the Great Hall. The Great Hall once housed the steamship booking and ticket agents, and to enter it was, and still is, indeed an adventure. The Grand Hall's three-arched portal beckons visitors to enter a hypostyle hall lavished with multi-colored marbles. This space, known as the Cunard Vestibule, is adjacent to the Great Hall.

The Great Hall, in the very heart of the building, measures 183 feet long, sixty-five feet high, and seventy-eight feet wide. Here can be found more boldly-hued marble walls and floors, multicolored murals, and overhead, domes and half-domes. The floor area directly below the central dome is impressed with a giant compass executed in colored marbles and bronze. The Great Hall's scheme was based upon the plan of Raphael's (Raffaello Sanzio) Villa Madama in Rome, which was begun in 1516. This Villa is regarded as one of the most innovative and influential works of the 16th century. With the

Cunard Building employing architecture of this stature, the building on Bowling Green was destined to be a skyscraper of substantial architectural significance.



(199) Cunard Building



(200) A cutaway view of the Cunard Line's R.M.S. Aquitania reveals a floating skyscraper of sorts.

The ceiling murals encircling the rotunda are of particular interest. They were executed by Connecticut-born painter Ezra Augustus Winter (1886-1949). Winter studied at the Chicago Academy of Fine Arts, and from 1911-1914 studied at the American Academy in Rome, Italy. Furthermore, he exhibited at the Architectural League of New York in 1922, and he exhibited work at the New York School of Architecture in 1923 where he was awarded a gold medal. Ezra Winter was certainly familiar with classicism and neoclassicism as applied to both painting and architecture. These ceiling works are his masterpieces and depict the world's oceans, maps, sailing ships, and mythical and allegorical figures. The voyages of Leif Ericson, Sebastian Cabot, Christopher Columbus, and Sir Francis Drake figure prominently.

For ocean travelers seventy-five years ago, the simple act of buying a ticket to see Europe was an adventure. This building, with its Great Hall, was their first destination. Their journey began luxuriously and continued so as a guest of Cunard. The building's architects and artisans fulfilled their roles as promoters of good taste, and as a result, a landmark was created.

Wrigley Building

Chicago

Graham, Anderson, Probst & White, Chicago

1921, 1924

The Wrigley Building is one of America's most recognizable skyscrapers. It is at once both business building and fairy castle, towering over moat and drawbridge, sentinel to "the path of plenty." Michigan Avenue's landmarks are many; still the Wrigley Building transcends those with poise, grace, and time-worn elegance. In short, this is the house that gum built.

William Wrigley, Jr. (1861-1932), commissioned this building as headquarters for the William Wrigley, Jr. Company, the popular chewing gum producer. In 1891, Wrigley traveled to Chicago on business and while there noted the popularity of chewing gum and realized the potential that this non-tobacco product had with the masses. By the early 1920's William Wrigley, Jr. operated a fifteen-acre plant in Chicago and chewing-gum-producing factories in Canada, Europe, and Australia ranking his the world's largest chewing gum manufacturer. In 1925 Mr. Wrigley retired from the presidency of the company he founded turning the reins of power over to his son, Philip K. Wrigley, but remained active in the firm as chairman of the board.

Five years before, it was decided that the internationally known company would be housed in a new skyscraper to be erected on the north bank of the Chicago River. Chosen for this commission was the Chicago firm of Graham, Anderson, Probst & White. Their design concept was anchored in the tradition of European romanticism and in the richness of the French, Italian and Spanish Renaissance. For their model the architects loosely borrowed the image of the *Giralda*, a 15th-century Spanish bell tower standing adjacent to the Cathedral of Seville.

The Wrigley Building was constructed in two sections, one south and one north, and at two different times. The south portion was constructed first, and constructed quickly. Excavation commenced in January 1920, the cornerstone was laid on November 11th, 1920, and on April 21st, 1921 the south building was declared completed. This, the south Wrigley Building, officially stood at thirty stories, 398 feet high. It consisted of a main office block of seventeen floors (210 feet tall) topped with a slender office tower of thirteen floors (188 feet tall).²⁷¹ The south building's footprint covers 11,496 square feet, and cost \$3 million. The north portion, more demure, was completed in May 1924. Executed in the same Renaissance style it rose only to the seventeenth floor, 210 feet above the sidewalk.

During the 1920's the Wrigley Building's tower delighted visitors with an elevator ride to its summit and public observatory. Though popular for years the observatory closed as other skyscrapers featured higher, more breathtaking views. Currently the tower floors, levels nineteen through twenty-six, are occupied by small firms. Here tenants enjoy the ultimate privacy of small quarters with a 360 degree view. The twenty-seventh floor provides access, via a spiral staircase, to the one-time observatory adding immeasurably to the charm of this stratospheric space.

Together, the north and south portions contain 451,616 square feet of office space and daily house an office population of some 1,300. In 1931, an enclosed pedestrian bridge

was constructed connecting both towers at the fourteenth floor level; ever since the "complex" has been thought of as only one – *the Wrigley Building*.

Bright white terra-cotta was the architects' choice for the Wrigley Building's exterior. This skyscraper was dressed with tons of the material that were fashioned into a variety of shapes, sizes, and designs. Large urns and finials, low-relief winged dragons, foliate patterns, and a host of intricate motifs were executed in white terra-cotta and affixed to the exterior. At its apex is a flagpole-supporting tempietto - a small ornamental classically-styled temple.



(201) Wrigley Building



(202) These stacked terra-cotta panels reveal a comical and long-forgotten story to pedestrians. Included in this symmetrical "story board" are griffins, symbolic of wisdom, vigilance and also vengeance, an athletic gnome, and salamanders – those heroic reptilian figures of righteousness that were thought impervious to fire - hot coals drop from their talons. This was the work of Chicago's Northwestern Terra Cotta Company. Photo by author.

One of the more "modern" features inside this Renaissance shell are its electric elevators. The south building has five, the north has nine. Elevators were, and still are, quite an important amenity when marketing office space to potential tenants. Competition be-

tween various manufacturers was formidable, and upon securing a contract, elevator companies also secured bragging rights:

William Wrigley, Jr., has used K&H elevators, as well as other makes, in his factory for eight years. He had ample opportunity to make comparisons. When he selected the elevators for his new office building, a monument to his business achievement, he chose K&H. Mr. Wrigley realizes that good elevator service attracts both tenants and visitors.

Kaestner & Hecht Elevators
Founded 1863 - Chicago²⁷²

This "Jewel of Chicago" does not become dormant at night, but to the contrary, the Wrigley Building comes alive. Since its completion some 200 powerful lamps have been focused on the building which nightly bathe the skyscraper in light.

General Motors Building

Detroit

Albert Kahn, Detroit
1921

A symbolic and colossal bastion of corporate America best describes this skyscraper. Here is the home office and general headquarters of America's largest industrial concern, the General Motors Corporation. Erecting this building was the dream of Boston-born William C. Durant (1861-1947), the controversial and consummate corporate organizer. He outlined the principals of mass production, low costs, wide distribution and increased profits. He organized the General Motors Company in September 1908, which was officially established as a *Corporation* in 1916, and became the sponsor for construction of this giant building in the period after the First World War.

Architect Albert Kahn (1869-1942) was approached by General Motors, with Durant spearheading the effort, and agreed to participate in perhaps the greatest commission he was ever to receive. The son of a rabbi, Albert Kahn was one of the most celebrated architects of the twentieth century. He was German-born, immigrated to America as a young boy, and was self-educated in architecture. Though he is most known as a designer of automotive plants he received hundreds of commissions throughout his career for buildings of all types with Detroit being the recipient of the majority of his work. In 1919 construction began on the twenty million-dollar General Motors Building with completion announced on November 20th, 1921.

The construction of the General Motors Building was a heroic effort. The plan of the enormous structure forms a double H, likened to branches emerging from a central spine. It is rationally and simply organized. Though Kahn executed this commission with finesse and verve its facades were not particularly experimental. The building's architecture is firmly grounded in the neo-classical style, a visual language that conveys its own ancient myth and meaning to the walls of this skyscraper. This is a building that might otherwise have been anchored in the avant-garde, in the European modernism of that time. The architectural vanguard did not interest this corporate client, only the tried and true image of antiquity. Ironically, the elegance and eloquence of Kahn's auto factories, an architecture with liberal uses of glass and steel, better represent twentieth century America than this company's home office.



(203) General Motors Building

The General Motor's Building, with a floor space equal to thirty acres, is a city within a city. Twenty-seven passenger elevators and numerous retail stores and restaurants serve thousands of employees and visitors daily. Other amenities include auto display rooms, exposition halls, and a gymnasium. In all there are 1,800 offices.

The proportions and statistics of this skyscraper:

- the General Motors Building stands fifteen floors, 220 feet tall
- ninety arched openings wring the first floor
- 292 three-story-tall Corinthian columns march around the building's top
- building's footprint covers 162,288 square feet
- floor area totals a staggering 1,321,202 square feet
- total cubic feet 20,411,000
- weight is recorded at a whopping 230,000 tons
- cubic yards of excavation equal 130,100
- structural steel weighs 15,000 tons, reinforcing steel weighs 1,478 tons
- Bedford limestone facing calculated at 450,000 cubic feet
- number of bricks used throughout were 8,790,000 and 100,000 barrels of cement
- building has 5,148 windows, light fixtures total 7,916
- originally outfitted with four 500 horsepower boilers and 5,000 radiators

Standard Oil Building

New York City

Carrere & Hastings, New York City

Shreve, Lamb & Blake, New York City

1922

The Standard Oil Building, one of Manhattan's "instant landmark" skyscrapers of the 1920's, stood thirty-one stories, 520 feet tall. It had a tantalizing curved facade that held to the bend of Broadway beginning at Bowling Green. Above, a rectangular "base" or mid-piece lifts an eight-sided tower above the massive office block below. The whole of the building makes a powerful statement about architectural massing in general, and skyscraper massing in particular. The lower "plinth" conforms to the street pattern of lower Manhattan while the tower pays homage to mid-town Manhattan by aligning with the towers *there*. On the very top is fixed a twelve tiered granite pyramid. Surmounting the pyramid is something that is pure metaphor and delight: four globes anchor what once was the world's largest aluminum casting, an interpretation of an oil-burning lantern – sans the genie. The lantern's solitary role is that of a steam vent, but what a positively apropos gesture; here, a symbolic vessel that cradled and slowly consumed this precious black liquid (oil of course) is propped up 520 feet into the air, high enough for everyone to see!



(204) Standard Oil Building

This is classical revival architecture at its best. Standard Oil's facades are bedecked with every classical contrivance known. The lobby is entered through an arched portal with a cartouche displaying the letters "S" and "O". The grand entrance hall rises thirty-six feet and features a beamed ceiling and white marble floors. Walls are wrapped with white marble and are adorned with pilasters, pediments, and near the top, are carved the names of company officers and that of the founder.

When completed, the Standard Oil Building was equipped with twenty-one passenger elevators installed by Otis Elevator. These were not like any before. Otis engineered a system to eliminate the need for uniformed personnel to shuttle the cars up and down. A system was perfected that allowed an automatic response be registered in the lobby, whereby one "controller" dispatched elevator cabs to the floors requiring service. It was begun here, in 1922, and this new system became quite popular - to the chagrin of elevator operators everywhere.

The soil beneath the Standard Oil Building, its site officially recorded and known as 26 Broadway, once belonged to Native Americans, to the Dutch, then the British, and for a time it even supported the home of Alexander Hamilton. But probably this site is most celebrated because of the series of "Standard Oil Buildings" that occupied it.

The world's most celebrated, and to some the most notorious, oil concern was headquartered on these premises starting in 1885. The Standard Oil Trust Company headquarters would remain at this location for the next forty-nine years. John Davison Rockefeller (1839-1937) founded the Standard Oil Company in Cleveland, Ohio, in 1870. In 1882, as a response to certain antitrust laws, the Standard Oil Trust was formed. The creation of the Trust made Standard Oil the biggest company in the oil industry controlling more than 90% of the country's refining capacity and almost as much of its pipelines. In 1883, the Standard Oil Trust Company relocated from Cleveland to lower Manhattan and occupied a series of small and rather insignificant office buildings there. A permanent headquarters building was sought, and so too was an architect to carry out the wishes of Mr. Rockefeller.

Ebenezer L. Roberts (1824-1890), a Connecticut-born, New York City architect was given the nod to design an appropriate structure for the swiftly growing – and undeniably powerful - company. This designer of churches, and a smattering of Brooklyn office buildings, arrived at a design to fulfill his client's wishes. After almost one-million dollars was spent, and after two years had passed, the building was finished. Roberts had raised a ten-story building, equipped with Otis elevators, at 26 Broadway; neither "Standard Oil" nor "Rockefeller" appeared anywhere on the building's face, only its address. It was officially opened on May 1st, 1885 and was flat-topped, faced with cream-colored granite, and was in possession of few design merits. The building was ponderous and visually "heavy," but nonetheless, this was now the corporate home to John D. Rockefeller and the powerful company he controlled.

Before long business success necessitated an expansion of the original building. In 1896, the New York City architectural firm of Kimball & Thompson commenced to design a fifteen-story, 263-foot tall, *addition to the rear* of the Roberts-designed building. Furthermore, they chose to add six more stories on top of the original. The result was a rather ungainly hybrid of an office building, a boxy challenger to its southern neighbor, the nine-story mansardic Welles Building (W. Pell Anderson, 1883), a substantial skyscraper in its own right.

In 1906, pundits eagerly recorded the following:

Many worthy men are convinced that No. 26 Broadway is the most perilous shelter on earth - a cave for pirates, a den for the cutthroats of commerce.²⁷³

The soup of "architecture and infamy" was further stirred in 1906:

At the lower end of the greatest thoroughfare in the greatest city of the New World is a huge structure of plain gray-stone. Solid as a prison, towering as a steeple, its cold and forbidding façade seems to rebuke the heedless levity of the passing crowd, and frown on the frivolity of the stray sunbeams which in the late afternoon play around its impassive cornices. Men point to its stern portals, glance quickly up at the rows of unwinking windows, nudge each other, and hurry onward, as the Spaniards used to do when going by the offices of the Inquisition. The building is No. 26 Broadway.²⁷⁴

By 1920, a somewhat benevolent writer penned the following about "No.26," and further recorded the rather colorful escapades of "young John D.:"

Almost directly across the street is that Holy of Holies, the Standard Oil Building, at No. 26. Whole chapters could be written about this one building, *perhaps the best known, certainly the most talked of, on Broadway*. As a practical demonstration in the gentle art of making money No. 26 Broadway is surely entitled to all the plaudits it receives.

Continuing:

Notwithstanding the dislike of the family for public notoriety, it remains a fact that young John D. frequently, in fact almost daily, weather permitting, drives to his office in a light gig drawn by two spirited horses. He seems to prefer it to a motor car. Nobody pays any attention except to mention his name as he goes prancing by.²⁷⁵

It was 1920, and one final architectural iteration was to come – the grandest of all. Prevailing thought dictated that the world's largest oil company deserved a more prestigious home, a taller headquarters. And, why not? Carrere & Hastings, with Shreve, Lamb & Blake, were summoned to design the new headquarters for the giant Standard Oil Trust Company. The current building – that of 1896 – and the nearby Welles were gobbled up into one development. Some of the existing steel framework was incorporated into the new block-wide behemoth, while the Welles was completely swept from the site. Two years later construction ceased, and rising above the muffled din of lower Manhattan stood the spectacular Standard Oil Building. The aged turf bounded by Broadway, Beaver, and New Streets, the very heart of old New Amsterdam, succumbed to the whims of oil executives, business scions, and the modern-day merchants as was done here three hundred years before. Here was monument building at its best.

The Standard Oil Company was an embattled company. In 1911, government anti-trust legislation forced divestiture of the company. The stately building at the foot of Broadway was for years the headquarters of both Standard Oil of New York (now Mobile) and Standard Oil of New Jersey (now Exxon), as well as other oil concerns. By the 1970's all

vestiges of the Standard Oil Company had abandoned the building for newer quarters in midtown Manhattan. The storied skyscraper that had so identified the company began by John D. Rockefeller *is still* simply known by its address, 26 Broadway.

Stock Exchange Annex

New York City

Trowbridge & Livingston, New York City

1922

The New York Stock Exchange was founded in 1792 at, or close to, the location at which it now stands. It has always been, and will continue to be, *the primary marketplace* for the nation's securities. At the turn of the twentieth century, George B. Post was called upon to design a replacement building for an earlier exchange headquarters. His response was a neo-classical extravaganza that was both accommodating and didactic. His 1903 building was the ultimate symbol of strength, power, authority, and permanence. Here was an architectural language that was digestible to a nation schooled in the values, the art, the mythology, and the architecture of ancient Greece and Rome. Here was an appropriate building "type" for the home of the Exchange and it remains today a timeless national landmark.

Designing and constructing a building adjacent to the venerable Stock Exchange was to prove a daunting task. Expansion of the office component of the Exchange was required after World War I, and a reputable firm was sought out to fulfill the requirements. The task was awarded to the firm of Trowbridge & Livingston, of New York City. This architectural firm had an impeccable reputation and it was familiar with the site having completed the Bankers Trust Building (1912), just thirty feet across Wall Street, and the prestigious banking house of J.P. Morgan (1913) just thirty feet across Broad Street. How does one insert a skyscraper into a neighborhood bristling with world-class skyscrapers, onto a site near the buildings of such stature as Federal Hall (Town & Davis, 1842), Trinity Church (Richard Upjohn, 1846), and of course the New York Stock Exchange? The answer is not that elusive.

After two years of construction, the Stock Exchange Annex was formally opened in October 1922. The design of the towering Annex was one of simplified neo-classicism. It borrowed from its surroundings but it did not rival them, and that is an important distinction. The parti is a telescoping tower laid-up with slabs of white marble. Corinthian pilasters and a full entablature ring the top with only a shallow pyramidal cap above. The twenty three-story skyscraper was given a stingy base, a first floor devoid of interest – almost fortress-like, on the Broad Street side. Windows here speak of domesticity, not of monumentality. Its facade symmetry is unyielding and its relationship to the Exchange is a strange, perhaps healthy, juxtaposition. However, it must be noted the Wall Street facade presents two-story tall Corinthian pilasters as the only real embellishment there. The Annex shoulders the paragon of capitalism to the south in an accommodating manner, contrasting with Boston's Custom House Tower²⁷⁶ where a skyscraper emerges from the core of a 19th century, neo-classical financial institution.

The construction of the Stock Exchange Annex required the removal of the notable Wilks Building (Clinton & Russell, 1889), and demolition came in 1920. Financier, businessman, and socialite investor, Matthew Astor Wilks, constructed a nine-story, mansard-topped office building on this preeminent corner. Just six years after his building's demise, Wilks died leaving an estate valued at \$17.5 million. The corner of Wall and Broad

Streets, always had, and always will, host the bastions of the wealthy and powerful; its continuity of purpose will never wane.

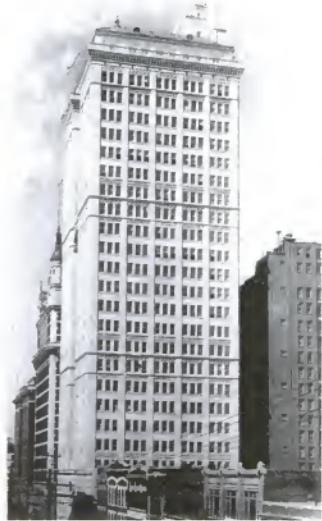
Magnolia Petroleum Building

Dallas

Alfred C. Bossom, New York City

1922

Shortly after the First World War the giant Texas oil company, Magnolia Petroleum, erected this skyscraper as its new headquarters. The company was founded in 1911 through multiple consolidations of refineries and crude oil producers. Continued growth and success required a downtown corporate icon – 1920's style. A skyscraper "with presence" was sought and plans were drawn. Upon its completion in August, 1922, the Magnolia Petroleum Building captured the title of Texas' tallest topping out at thirty-one floors, 430 feet.²⁷⁷



(205) Magnolia Petroleum Building

New York based architect Alfred C. Bossom (1881-1965) was summoned to serve as designer for the project. Bossom, a British-born architect and politician, designed a Beaux-Arts tower where above the third floor its plan becomes U-shaped; on the eighteenth floor a decorative bridge connects the two wings. The main Renaissance-inspired entrance is bracketed by Ionic columns and is marked by a decorative arch. The building's stone and terra-cotta facades are segmented twice by courses, which, without these visual breaks, the sheer facades would appear mundane, lifeless, and yearning for some decorative relief.

Above all is a pronounced cornice that brings finality to the upward thrust. Not easily visible from below are giant hipped roofs clad with green Spanish tile and a prominent chimney.

Shortly after completion writer Fiske Kimball commented about the Magnolia Petroleum Building in *The Architectural Record*:

Perhaps the most notable of the Southern office buildings are those which have been called into being by the oil industry in Texas. Chief of these is the Magnolia Building in Dallas, which rises to a height of four hundred and fifty feet (sic). As in many others, north and west, this extreme height is less the result of urban congestion than of a desire for advertising superlatives. Without feeling that the building makes any really novel contribution to the history of the skyscraper, one may well admire its gaunt mass rising against a background almost of open prairie.²⁷⁸

Perhaps the most unusual aspect of the Magnolia Petroleum Building, and what is indeed an "advertising superlative" is above its roof, a giant interpretation of the company's symbol. Mounted high atop a steel scaffold that can be interpreted as an abstraction of an oil well, is fixed a large revolving red neon sign. The thirty-by-forty foot sign depicts the mythological creature Pegasus, a winged horse imbued with attributes such as speed, nobility, and grace.²⁷⁹

An advertising card, dated c.1930, also advertises the Company's products:

Magnolene
 The Dependable Lubricant
 Will Solve Your Automobile and Machinery Lubricating Problems
Magnolia Gasoline
 Insures Maximum Mileage
 Over 600 Stations in the Southwest
 There is One Near You, Let Us Serve You
 Magnolia Petroleum Company

London Guaranty and Accident Building

Chicago

Alfred S. Alschuler, Chicago

1923

When completed the London Guaranty and Accident Insurance Company, based in Britain's capital, was the premiere tenant if this striking piece of architecture. It stands on the south side of the Chicago River, adjacent to now-tony Michigan Avenue and atop double-deck Wacker Drive. The London Guaranty's cornerstone was laid on December 3rd, 1922 and by its completion its owners will have spent \$3,416,500 for it, a princely sum for the Prohibition Era. This skyscraper stands twenty-one floors, 325 feet tall, and includes eight elevators.²⁸⁰

The building's welcoming and windy front plaza embrace both pedestrians and motorists beckoning them to pause and enjoy its antique facades. This skyscraper displays architect Alschuler's masterful handling of this tall commission and demonstrates his ease with working in the neo-Classical mode. His adept crafting of the tower's seven facades,

the pushing, pulling, and especially the concavity of its north face is simply superb. Its main entrance, featuring four three-story columns flanking a monumental arch, recalls the triumphal arches of Rome. Facades, laid-up with Indiana limestone, are sprinkled with stone urns and carved dragons. Marking the eighteenth through the twentieth floors is a *concave Corinthian colonnade*, a rare instance in American architecture.

As one enters the London Guaranty Building one is confronted by a sumptuous, sixteen-sided, lobby. The space is adorned with a gilded and coffered ceiling, one large chandelier, and painted lunette panels of early Chicago River scenes depicting shipping and commerce. A wall plaque offers this bit of thought-provoking prose:

We will never bring shame upon this, our city, by any act of dishonor. We will fight for the ideals and the sacred things of the city, both alone and with our comrades. With heart and mind and hand we will strive that we may bequeath this city not only no less nobler and more beautiful than it was transmitted to us.²⁸¹



(206) The very top of a skyscraper is rarely viewed so closely. This is the summit of Chicago's London Guaranty Building (Alfred S. Alschuler, 1923). Its smoothly dressed limestone and Greek-inspired bronze pedestal support an orb symbolic of the Earth. Photo by author.

This neo-Classical extravaganza is defined by one more architectural contrivance. Affixed to the London Guaranty's roof is a replica of the Choragic Monument of Lysicrates, an Athenian landmark constructed in 334 B.C.E. This sixty-five-foot tall ornament looks decidedly odd, yet without it the building would be far less potent. The "Monument" does bring a sense of upward finality to this tower but certainly many other architectural devices existed to accomplish that fact, if indeed that was Alfred Alschuler's goal with its

placement. Perhaps Alschuler viewed architecture as a lengthy continuum, a language that speaks to generations of Chicagoans as it did to generations of Athenians as far back as 2,300 years ago. If so, then Chicago's "Choragic Monument" becomes a talisman, a gift "transmitted to us" to make today's Chicago "no less nobler and more beautiful than it was."

*This is the largest building in the world devoted exclusively to a single industry...Imagine a bazaar street twenty blocks long, lined on each side with furniture stores, each 100 feet in depth. Picture in these shops hundreds of thousands of dollars worth of home furnishings*²⁸²

American Furniture Mart

Chicago

Raeder Associates, Nimmons and Dunning, Chicago

1924

Nimmons and Dunning, Chicago

1926

This skyscraper was not christened the "Chicago" or "Midwest" Furniture Mart but the American Furniture Mart, a complex of truly national proportions and international stature. It was here, that for decades were headquartered the centers of furniture and home furnishings, merchandising and wholesaling. This giant building was the destination of thousands of manufacturers desiring to get a marketing foothold in an international arena, and of hundreds of thousands of buyers from throughout the world looking to satisfy the public's tastes and to improve their company's bottom line.

Chicago was once considered the central marketplace of furniture makers, especially piano manufacturers – there were more here than anywhere – as its location was near to the wood-producing forests, skilled furniture craftsmen, and also because Chicago was the hub of national shipping by rail and barge.²⁸³

The American Furniture Mart was constructed in two parts; the sixteen-story east section was first. The west section, grafted to the east building two years later, was the taller at thirty floors, 474 feet high. Together, their footprint measured 500 by 200 feet. Of heroic size, the structure contained just over two-million square feet of floor space – ranking it one of the largest buildings anywhere. Curiously, the Mart seemingly turned its back to the shore of Lake Michigan preferring instead to face the giant city to the west. Its main façade has pleasing proportions and borrows from the architecture of the English Gothic. Finely detailed, the Mart's dark brick and cream-colored terra-cotta walls feature strong vertical piers that tie base to rooftop culminating above only to relinquishing their "hold" on the building to the attention-getting, and delightfully playful, pyramidal cap with tiny dormers. This tower's summit is further energized by four thirty-foot-tall pinnacles standing sentinel at its corners. The cap, covered with deep blue glazed tile and topped by a Renaissance-like lantern, is lighted each evening offering yet another element of romance to Chicago's nocturne skyline.

Inside this "cathedral of furniture" were displayed furnishings from the factories of 235 cities. These were represented by some 700 exhibitors who displayed home furnishings from most periods of furniture design. European and American modernism, potent as they were, seemed to not belong:

The most popular period style, authorities at the Furniture Mart agree, is Georgian. Reproductions of the masterpieces of the eighteenth century designers seem to have found general acceptance in the American home...Contemporary furniture, although greatly subdued as compared with the "modernistic" which began to attain prominence in 1928 and 1929, is still too individual to appeal to the volume market, its sale being restricted mostly to the metropolitan centers such as Chicago, New York, and Los Angeles.²⁸⁴

One can only conclude that Early American, American Georgian, and American Federal furniture reproductions appealed mostly to the "volume market," the conservative tastes of the *American* middle class.²⁸⁵ The Gothic inspired architecture of the Mart's exterior prepared visitors for an equally derivative interior. An imposing lobby with ogee arches and an abundance of Gothic flourishes set the tone, and buyers and sellers dined in the seventeenth floor club rooms where only the twelfth century reigned and all in attendance could make believe they were monks, bishops and members of the gentry. What perhaps started out as an international marketplace for furniture ended up as a lesson in the mundane buying habits of *Americans*. After all, this building was an *American* monument to the past, to furnishings of earlier *American* periods and to the desires and tastes of the *American* masses, and in that sense this building was aptly named - it was indeed the *American Furniture Mart*.

Chicago Temple Building

Chicago

Holabird & Roche, Chicago

1924

This skyscraper is one of America's most unusual, a surreal stalagmite growing from the floor of Chicago's Loop. Here stands a building where the marriage of both the sacred and the profane reside, a building where one is to render unto Caesar what is Caesar's and to render unto God what is God's. It is both business skyscraper and sanctuary, and it is topped by the world's tallest church spire.²⁸⁶

Built by the First Chicago Methodist Episcopal Church at a cost of \$5 million, this skyscraper rates a strong curiosity with tourists and long-time residents. The whole of the structure is of Indiana limestone with the bottom portion executed in a generic-corporate architectural style, while on top neo-Gothic reigns. During its two years of construction a host of flying buttresses, pinnacles, gargoyles, and hundreds of square yards of stained glass were woven into the design. The two-story-tall sanctuary seats 1,200, one smaller chapel seats 400, and another, the smallest serves sixty and is only accessible by negotiating a 173-step staircase. Tiny patios were inserted just outside and between the stone pinnacles, observatories for the weary. Church offices occupy the skyscraper's first two floors. The remainder is rented to businesses as in any other skyscraper.

This skyscraper church was constructed on the site of four previous Methodist church buildings. The first was a sanctuary made of logs and was erected in 1838. The others were destroyed, one in the Great Chicago Fire of 1871.

When completed, the Chicago Temple Building was Chicago's tallest, a title it held until 1930 and completion of the Board of Trade Building; the Temple also ranked the fourth tallest skyscraper on Earth.²⁸⁷ The Chicago Temple Building has a twenty-one story of-

fice portion that rises 260 feet from the sidewalk. Atop this is the church proper which adds 140 feet reaching to the steeple base. The steeple, including its cross, rises another 169 feet making the entire structure 569 feet tall. This lofty appendage is brilliantly lighted each night and is visible for some twenty miles.



(207) Chicago Temple



The
STRAUS BUILDING
Michigan Avenue at Jackson Boulevard
CHICAGO

(208) Straus Building

Straus Building
Chicago
Graham, Anderson, Probst & White, Chicago
1924

The investment banking firm of S.W.Straus and Company had this skyscraper constructed as its Chicago headquarters. The business was founded in New York City in 1882 by Frederick W. Straus, an experienced banker and the father of Simon William Straus (1866-1930) after whom the company would later be named. Simon was admitted as a partner of the firm in 1888 and became the chairman of the board in 1898. He had extensive business ties, sat on the boards of numerous corporations, ascended to the presidency of S.W. Straus, and founded the Straus National Bank & Trust Company of Chicago and the Straus National Bank & Trust Company of New York. S.W. Straus was a nationally known institution dealing in mortgages, real estate bonds, and among other things made loans to investors and builders of large office buildings. Its headquarters were situated on Fifth Avenue, a high visibility location and one from which its staff could operate most effectively. By the early 1920's it was decided an equally prestigious office was required in Chicago.

Since 1872, just after the great Chicago Fire, the Stratford Hotel was erected on Michi-

gan Avenue overlooking Lake Michigan just a short distance away. It stood six stories and was well appointed, well located, and well known. Its architect was none other than W.W. Boyington, a well established and well respected practitioner. By the early 1920's the site of this early landmark hotel would be marked for the erection of a stone-faced skyscraper and by 1922 the inevitable occurred: The Stratford Hotel was wrecked, its facades and floors thundered to the ground.

After almost two years of construction Simon William Straus' company gained a powerful presence in Chicago. Its building's symmetrical face, freshly coated with gleaming Indiana limestone, stood majestically on the skyline. The Straus Building topped out at thirty-two floors, 475 feet tall. Architecturally, the Straus' design draws from Renaissance sources, and the familiar stepped pyramid recalls that of the Tomb of King Mausolus at Halicarnassus (c.353 B.C.E.). The building is large, it includes two basements, and fronts 171 feet on Michigan Avenue and 160 feet on Jackson Boulevard. The Straus Building contains 440,000 square feet and twelve passenger elevators.

At the twenty-first floor, the building cut back and allowed a central tower to fully emerge. During the late 1920's the twenty-third floor housed a radio studio, and a large Wurlitzer organ, for a series of local radio stations. Reports claim it "was a first-class studio facility" and that "public response to the extensive new facilities was overwhelming, and the audience area was filled to capacity much of the time." The thirty-second floor once housed a public observatory from which to oversee all of Chicago and Lake Michigan. The Straus Building's pyramidal cap supports a unique ensemble, that of a giant "beehive" on its top flanked by the heads of four giant bison on its corners. Wedged between the "beehive" and the bison heads is a belfry containing four bells ranging in size from 1,500 pounds to three-and-one-half tons. Today these are heard marking the hour and are calibrated by computer.

The "beehive" has a metal armature that is covered with clear glass. Its purpose was to abstractly represent the firm's diligence, thrift, and Straus' business acumen.²⁸⁸ Perhaps as homage to the Renaissance, Chicago building designers recalled the images of the Barberini (Pope Urban VIII's family) and their family crest – the famous Barberini bees. Renaissance architect Gianlorenzo Bernini included several huge bronze bees in the design of the baldacchino (1624-33) in Rome's St. Peter's Basilica. Instead of bees, as in the Eternal City, a hive would do for the Windy City. The glass "beehive" identified the Straus Building for miles, it housed four powerful, rotating, aviation beacons that shone from dusk till dawn. In 1954, after thirty years, these were extinguished. Today, the famous "beehive," the only one of its kind known, now houses six 1,000-watt lamps. These large lamps are housed inside a box of deep blue-colored glass that is perched *inside* the "beehive." Each night they glow toward the cardinal points but unfortunately are far less engaging than their predecessors. The four bison heads can be interpreted as symbols of strength and perseverance, qualities associated with a bison, and qualities a financial institution would naturally cherish.²⁸⁹

Due principally to a lethargic economy, the firm of S.W. Straus did not fare well during the early 1930's. Straus and its affiliates abandoned their Michigan Avenue home and relocated to another in Chicago's business canyon, La Salle Street. Its name would never be associated with a monumental skyscraper ever again, and the once successful firm closed as a casualty of the Great Depression. The Renaissance-inspired Straus Building has passed through many hands since then, it still has its "beehive" and menagerie, and it stands just as regally as in 1924.

*The newspaper is an institution developed by civilization to present the news of the day, to foster commerce and industry, to inform and lead public opinion, and to furnish that check upon government which no constitution has ever been able to provide.*²⁹⁰

*It is to be remembered, however, that while the ornaments in every fine ancient building, without exception so far as I am aware, are most delicate at the base, they are often in greater effective quantity on the upper parts. In high towers this is perfectly natural and right, the solidity of the foundation being as necessary as the division and penetration of the superstructure; hence the lighter work and richly pierced crowns of late Gothic towers...In such truly fine cases of this disposition the upper work is effective by its quantity and intricacy only, as the lower portions by delicacy; so also in the Tour de Beurre at Rouen, where, however, the detail is massy throughout, subdividing into rich meshes as it ascends.*²⁹¹

Tribune Tower

Chicago

Howells and Hood, New York City

1925

The most celebrated architectural competition in America was not for a museum, an opera house or a library, but for a skyscraper, this skyscraper...the Tribune Tower. Completed in 1925, it was America's tallest newspaper-headquarters building and one of the last Gothic-inspired skyscrapers erected anywhere.²⁹² Tribune Tower was a giant among its peers, popular with Chicagoans and critics and "an impulsive flame of beauty caught in a mould of stone."

Having relocated six times since its founding in 1847, the Chicago Tribune Company decided to abandon its vagabond ways and looked to construct a "more permanent home." The word went out on June 10th, 1922, the newspaper's seventy-fifth anniversary, inviting architects from around the world to design "the most beautiful building in the world" for its new headquarters.

The Tribune herewith offers \$100,000 in prizes for designs for a building to be erected on its vacant lot at North Michigan Boulevard and Austin Avenue...The contest will be under the rules of the American Institute of Architects. Competition will be open and international. Each competitor will be required to submit drawings showing the west and south elevations and perspective from the southwest, of a new building to be erected on The Tribune's property at the corner of North Michigan Blvd. and Austin Ave. Architects desiring complete information are requested to write to Robert R. McCormick, Joseph M. Patterson, Editors and Publishers.²⁹³

Entrants eagerly responded. The submission deadline was posted at December 1st, 1922, just six months and two weeks in which to create a masterpiece. Though a tall order, two-hundred-four entries from twenty-three countries were accepted, with fifty-nine more tagged invalid due to their late arrival. All drawings were submitted anonymously.

A selected group of prominent Chicagoans whittled the entries down to but a few. These were delivered to the desks of Tribune hierarchy. The next day, December 2nd, the fateful

announcement was made: first prize was awarded to John Mead Howells and Raymond Hood of New York City. Fifty-thousand dollars was granted to them, as well as many accolades to their competition entry.²⁹⁴ Howells and Hood's entry drew inspiration from the ecclesiastical architecture of a fifteenth century bell tower – which, in this case, looked further into the past – to the Gothic. The architects' model for the Tribune Tower was the Tour de Beurre (Butter Tower) of Rouen Cathedral, France. It was erected between 1487 and 1507, clearly outside of the traditional boundaries of the eleventh, twelfth, and thirteenth centuries, those most often associated with the Gothic style. The Butter Tower, located at the Cathedral's southwest corner, stands 252 feet tall, and by most standards is still a beautiful and significant landmark. Just why it was chosen as an architectural emissary for a Midwestern office tower has largely been unclear.



(209) Tribune Tower

Construction of the Tribune Tower began in May, 1923 and by May of 1925 Chicago Tribune employees began moving into "their" skyscraper. Total cost of the building was fixed at \$8.5 million, then the costliest skyscraper anywhere when measured on a *per cubic foot basis*. This condition is better understood when one takes into account the amount of stone used throughout and the carving of that stone. The Tower's stone jacket is replete with medieval imagery. Engaged and flying buttresses are present as well as crockets, finials, filigreed screens, *fleur de lis* designs, and a host of gargoyles and gro-

tesques. A stone menagerie where various animals are personified wraps the tower. Tens of thousands of stone blocks had to be finished and set into place, all of which was very costly.

Originally the disposition of the Chicago Tribune's departments was as follows: The basement and its six sub-basements were devoted to the stereotype foundry, press room, mailing room, paper storage, boilers, lighting and ventilation plants, chillers, and pumps. The first floor was occupied by the Tribune's grand lobby, the Public Service Office, and behind it was located the massive mailing and routing room. The second floor was devoted to the business, radio, and circulation departments. Above them on three was the composing room where seventy-two linotype machines incessantly chattered, on fourth the "Local Room," while "Auditing" filled floors five, six, and seven. "National Advertising" could be found on the eighth floor, "Local Advertising" "Classifieds" and "Purchasing" were on the ninth and tenth. The "Copy" and "Art" departments occupied the thirteenth floor, while feature editors and comic strip artists occupied the fourteenth. Up on the twentieth floor could be found the photographic studios, and on the twenty-fourth the offices of the editor, publisher, editorial writers, other executives and the Tribune's reference library. Finally, on the thirty-first floor were located the studios of the editorial cartoonists. The thirty-second floor was the highest occupied floor and was rented only to tenants willing to pay top-dollar.



(210) Entwined flower stems culminate in a two-flower, three-leaf delight executed in Indiana limestone.
Photo by author.



(211) Decorated buttress near the skyscraper's main entrance recalls the vertical expressions of the French Gothic period. Photo by author.

The exclamation point of the Tribune Tower was its exterior promenade that wrapped around the twenty-fifth floor. This exhilarating red-brick-paved promenade allowed visi-

tors to walk beneath the five-story-tall flying buttresses. The thirty-third floor featured a public "lookout." Still higher, the thirty-fourth floor was accessed via a winding staircase and billed as the highest public-accessible point in Chicago. The entire experience could be had for twenty-eight cents, which included three cents tax. A souvenir pamphlet of 1937 describes the experience:

Enter now the high speed elevators and be whisked to the 33rd floor. On a clear, bright day the view from the observatory of the Tribune Tower is splendid beyond words. No matter where the observer looks the scene is impressive.

The author goes on to comment about the "clear days, when the wind blows briskly from the west, the golden fringe of the famous sand dunes of northern Indiana shows up radiantly along the eastern horizon as far as Michigan City." He writes about the "curving forest of smoke stacks following the sweep of the shore" and the "teeming hives of industry" and the visibility of "the great ore boats." In the 1960's this once-popular tourist attraction was closed due to the competition provided by the forty-first floor observatory of the Prudential Building six blocks to the south.²⁹⁵

Inside Tribune Tower guests and tenants appreciated its air conditioning system, claimed to be the largest of its kind in the world, with a cooling capacity equal to the melting of 600 tons of ice per day. Four hundred air conditioning units were installed throughout the Tower and were augmented by five "central type units" that dried, cooled or humidified the air, according to the season.

One feature of the Tribune Tower that is truly unique is its collection of precious stones. More accurately, ringing the base of the building are samples of stones and bricks collected from famous structures the world over. These architectural fragments, donations from over thirty countries, were delivered to the Tribune Company for inclusion into the exterior walls of its new skyscraper. Currently the collection numbers over 150, each of which is imbedded into the walls and properly labeled. One specimen of very special meaning was donated from the Butter Tower of Rouen Cathedral. Others arrived from the Great Wall of China, the Taj Mahal, the Parthenon, the dome of St. Peter's in the Vatican, the Houses of Parliament, Notre Dame Cathedral, the Great Pyramid of Cheops, Aztec ruins, Santa Sophia in Istanbul, and the Petrified Forest in Arizona. This architectural treasury allows you to touch and ponder the great structures of the past and never leave Chicago.

Delicacy at the lower portions of a building featuring carvings and exotic stonework that is accessible both visually and intellectually *by the people* was of paramount importance to the romantics of the nineteenth century and, of course, to John Ruskin. It is altogether proper to speculate that critic and philosopher Ruskin would have appreciated and praised the Tribune Tower with its effective "upper work," its detail, and "massy throughout, subdividing into rich meshes as it ascends." Architects Howells and Hood produced a *vertical* design that was timeless, that was image-conscious, and a design that was, after all, *chosen* – selected from a wide field and termed "the best." This, "the most beautiful building in the world" is of an architecture wrapped in myth and long-forgotten meanings. It is a haunted tower when blanketed by a lake fog and a proud pillar on crisp winter mornings. The Tribune Tower is also a corporate monument, a Chicago landmark, and a stone skyscraper of the highest caliber.

Tribune Tower Points of Note:

- Tribune Tower stands thirty-six floors, 462 feet above the sidewalk

- rooftop flagpole measures 125 feet, ultimate height: 587 feet above Chicago
- below the sidewalk are seven levels (sub-basements)
- sixty caissons descend to bedrock 125 feet below the sidewalk
- exterior walls are composed of 13,160 tons (188,000 cubic feet) of Indiana limestone
- its skeleton weighs 9,316 tons of steel
- daily population of 2,500, Tribune employees 2,000 with the remainder tenants
- interiors are illuminated by 18,000 electric lights
- total cost upon completion: \$7 million
- ten passenger elevators serve the Tower

Book Tower

Detroit

Louis Kamper, Inc., Architects, Detroit

1926

In 1917, Detroit-born businessman James Burgess Book, Jr. (born 1890) proudly announced that the Book Building was officially opened. Here was a structure that rose thirteen stories, included eighteen large stores on the first floor, forty-three shops on floors two and three, and 1,600 offices on the remaining floors. This giant building stood on a block bounded by Washington Boulevard and Grand River Avenue in downtown Detroit. Landmark as it was, larger adjacent projects were planned. James Book sought to enlarge and augment the building already bearing his name with a development intended to be Detroit's tallest skyscraper. The following betrays his strategy:

Mr. Book made the general plans for the building, having it continually in his mind during his eastern and European travels, where he studied other large edifices and took note on various important features, obtaining a motif here and there which he turned over to his architect, who worked it out in detail until the completed structure is one of marvelous grace and beauty and of notable serviceableness (sic).²⁹⁶

As originally published in the early 1920's, the plans for the Book Tower were considerably different and much taller than those actually followed in 1924. Originally eighty-one floors were planned with the building's base accounting for forty-two floors and a tower above adding thirty-nine more. The tower was to measure 120 by 125 feet and was to be fitted with "the most powerful searchlight in the world." It was of Gothic inspiration and draped with granite, marble, light buff-colored brick, and glass. The scheme for this eighty-one story skyscraper was abandoned however, despite its innovation and courageous scale.

Architect Louis Kamper, and his architect son Paul L. Kamper (1897-1930), offered to J. B. Book, Jr. a skyscraper adjacent to and connected to the original Book Building. The new building was to be named in honor of J. B. Book, Jr.'s father. After two years of construction the Book Tower was completed. In 1926, at thirty-six floors, 472 feet tall, the Book Tower became Detroit's tallest.

Architecturally, The Book Tower is a hybrid of sorts, and it stutters as it rises. Multiple cornices and other horizontal flourishes arrest the eye often before reaching the summit.

The Tower's facades are filled with caryatids, pilasters, and a host of classically inspired sculptures. Topping all is a giant hip roof punctured with dormers. One can only conclude that J. B. Book's excursions and architectural note taking were not wasted. To the contrary, the fruits all of these diverse sketches and eclectic notes were apparently employed on his father's namesake, simultaneously. At completion and for years afterward, the Book Tower was greeted with praise and ridicule. In time others would come to rise higher than the Book and in quick succession rose the Penobscot (1928), and the Guardian (1929).



(212) Book Tower



(213) Paramount Building

Paramount Building

New York City

Rapp & Rapp, Chicago

1926

The Paramount Building is yet another fine example of the stepped-back skyscrapers of 1920's Manhattan. From sidewalk to its summit, the Paramount retreats from the building's vertical base line nine times. When officially completed on November 17th, 1926, it held the title of being the tallest building in midtown Manhattan stretching upward thirty-five floors, 420 feet into the sky.

The Paramount Building, still a popular landmark, stands in the very heart of Times Square. It fills the block on Broadway between Forty-third and Forty-fourth Streets, a dis-

tance of 200 feet, and extends to the west a distance of 207 feet. This development, erected by the Paramount Pictures Corporation at a cost of \$16.5 million, originally included a 4,000-seat theater, commercial, retail, and office space. Here too was once the home of the CBS radio network.

The architecture of the Paramount Building can be loosely compared to the architecture of pre-Columbian Mexico. More specifically, its massing recalls that of Mayan or Toltec temples. Beyond the building's massing, the Paramount exterior is somewhat nondescript. Its walls are of light brown brick and are trimmed with Indiana limestone. There are two entrances on Broadway, one for the office component served by twelve high-speed elevators and containing 265,000 square feet. The southern-most entrance was for the now-shuttered Paramount Theater. This picture palace's entrance was originally marked with a huge canopy decked with hundreds of lights; it was removed years ago. Inside, the lavish interior and enormous auditorium were made possible by six 155-ton trusses. Here was a theater of the first order, an entertainment landmark of distinction.

But perhaps the most fascinating aspect of the Paramount's exterior can be found at the very top. High above Times Square is positioned a delightful four-faced clock, and above this, a nineteen-foot-diameter multifaceted globe. The globe was chosen because it was thought to be symbolic of the worldwide appeal of Paramount's motion pictures. Each night the clock faces and the globe are lighted identifying the building for miles.

New York Telephone Building

New York City

McKenzie, Vorhees & Gmelin, New York City

Ralph Thomas Walker, New York City

1926

This mountain of brick took three years to construct and is considered to be the *first* Art Deco skyscraper. The New York Telephone Building's massing and decoration were integral to this project long before the seminal Exposition des Arts Decoratifs in Paris was unveiled in 1925. Already, by the mid-twenties, low relief, streamlined and stylized human, plant, and animal images were making inroads into mainstream art. All are present here, and, with this building, decoration and massing have coalesced to produce an architectural masterpiece, a paragon of Art Deco design.

The firm responsible for the New York Telephone Building was that of McKenzie, Voorhees & Gmelin, a respected Park Avenue partnership. It was founded when an agreement between Andrew McKenzie (d.1926), Stephen Voorhees, and Paul Gmelin (1859-1937) was reached in 1910. It ended sixteen years later upon the death of McKenzie whose replacement was a young but gifted architect, Ralph Thomas Walker (1889-1973); afterward, the firm was known as Voorhees, Gmelin & Walker. Walker studied at the Massachusetts Institute of Technology, served an apprenticeship, and became a leading figure in architecture from the mid-twenties onward. He was a noted writer, editor and critic, and he served as the president of the American Institute of Architects. Incidentally, Walker was the creative force behind the design of the New York Telephone Building. Eminent author and architectural commentator Carleton Knight III said this skyscraper "remains one of the firm's masterworks."²⁹⁷ "Masterwork" is a powerful accolade to bestow on any building or firm, and is certainly deserved here. The Telephone Building's footprint approximates 52,000 square feet and in total it contains twenty-five acres of floor space; At completion this was christened the world's largest telephone build-

ing.²⁹⁸ Its foundation partially consists of twenty-two caissons, each eight feet thick and forty feet long. These were sunk to a depth from fifty-five to seventy-five feet. The whole of the building can be described with two components: an eighteen-story parallelogram-shaped base with a fifteen-story square-shaped tower. Chiseled out of this mass is space. Whole chunks of space were addressed in a *subtractive process* that reduced the final product to no less than eight setbacks with a tower and base forever in tension; the tower's axis with relation to the base was effectively twisted. In all, seventeen million cubic feet were captured within its walls.

The Telephone Building's exterior is of buff brick, limestone, and granite. Its walls are slathered with low-relief carvings and moldings of all sorts of decoration. An abundance of grapevines and grape clumps dance across lintels, pilasters, and spandrel panels. Sculptured pelicans, fully bloomed flowers, and elephant heads figure prominently. Occupying a central position among carved-stone thickets are the ubiquitous Bell System bells. When the building was young, this, the world's largest telephone building, was brilliantly floodlighted, its powerful exterior lamps secured behind and between its summit's buttresses. Its top, 498 feet above the street, was an inland lighthouse.

Spectacular best describes the Telephone Building's lobby. Here are cast and sculpted sunbursts, various geometric designs, and a virtual garden and menagerie on walls and on its twenty-five-foot-high ceilings. Here is a visually delicious space daily transversed by 6,000 office workers. Twenty-four passenger elevators whisk visitors up and down while four immense boilers keep them warm. In 1927, this building, the brainchild of Ralph Walker, was awarded the Architectural League of New York's Gold Medal of Honor. Today, this structure is best referred to as the Barclay-Vessey Building, a name revealing its location on the lower west side of Manhattan rather than its sponsor and first owner.



(214) New York Telephone Building

*Helmut Jahn: It's eccentric, idiosyncratic and romantic, I don't know if I'd call it an architectural masterpiece. But it's very important to Chicago.*²⁹⁹

Jewelers Building

Chicago

Thielbar & Fugard, Chicago

Giaver & Dinkelberg, Chicago

1926

What a delightful and bombast building this is! When completed the Jewelers Building was instantly recognizable owing to its unique profile and height. For a brief time the domed Jewelers ranked as the "Windy City's" second tallest building at forty stories, 523 feet; It stood a mere forty-six feet shy of the steeple-topped Chicago Temple. Still proudly standing, this landmark skyscraper is the epitome of 1920's romanticism hoisted to gigantic scale. It serves to stir us, to awaken our inner fantasies and tickle our imaginations. These, too, are the tasks of architecture and here, with the Jewelers Building, they are fully embraced.

Wallace Clark (1863-1935), Chicago businessmen who devoted forty years of his life as a developer of homes, apartment buildings, and office towers, was the force behind the construction of this office skyscraper. Clark organized a syndicate, the Wacker-Wabash Corporation, and chose the Chicago architectural firm of Thielbar & Fugard to develop the plans for what was to become his largest and most valuable project. Giaver & Dinkelberg, also of Chicago, would serve as consulting architects; It would take three years to complete the Jewelers Building.

Located on the corner of Wacker and Wabash Streets the Jewelers Building anchors the north end of a century-old neighborhood home to jewelry and gemstone wholesales and retailers. The original concept of the skyscraper's backers was to construct a single mart, a large center for the jewelry trade. A minute elevator ride would substitute traveling blocks to conduct business. And, perhaps best of all, the new skyscraper would feature an indoor, and therefore very secure, parking facility. The resultant structure did indeed have indoor parking, twenty-four stories of it that held 600 cars. Tenants and visitors could effortlessly drive inside, be met by an attendant who would dispose of their vehicle, then access the nearest elevator for destination in the office tower. Three automobile elevators served all floors within the parking structure whisking autos from drive-in ramp to twenty-fourth and back. The world's highest garage employed 189 power operated freight elevator doors, the largest usage of its type anywhere.³⁰⁰

Some offices within the skyscraper were rented by companies involved in the jewelry business, but not all. The building's largest tenant was the Cleveland-based Pure Oil Company. In 1927 that firm signed a long term lease and occupying floors eighteen through twenty-three. Within only one year of completion, the skyscraper was officially renamed in honor of this company, and of course its financial commitment to the building.³⁰¹ In 1940, the "parking lot experiment" was abandon in favor of conversion into office space, as it was discovered that file cabinets and desks could generate more revenue than cars.

The popularity of the Jewelers, due in large part to its amenities, stunning tenant views, and pivotal site on the Chicago River, has made it a perennial favorite among Chicago businesses. Also contributing is its architecture: a skyscraper the likes of this will never be erected again and everyone knows it. The Jewelers Building is palace-like, an extruded wedding cake slathered with frosting, ornate and dazzling. Architecturally its clas-

sification is difficult but a free interpretation of the Baroque is most applicable. Its walls are profusely decorated with every type of fifteenth and sixteenth century architectural device – all of it in tons of cream-colored terra cotta. There was no distinction between the office tower and the parking block below, each was treated to produce a single unit, a skyscraper of one piece. Where other architectural design philosophies would have demanded that function would dictate exterior form, the lower half of the Jewelers Building would have appeared as one large concrete deck system – a parking garage albeit 1920's flavor. But common sense and slight-of-hand prevailed and the bottom twenty-four floors of this skyscraper appeared as nothing more than a large block of office space. Outside walls of office-size windows and proper trimmings camouflaged whatever automobile goings-on there were inside.



(215) A Baroque-inspired extravaganza anchoring the Jewelers Building's corner. Photo by author.



(216) The domed top of the Jewelers Building is a visual reward for those who look. Photo by author.

Unquestionably the great forty-foot high dome topping the tower is the building's pièce de résistance. What better culmination of the building's upward thrust than this? It marks the building for miles around and trumps the four corner "temples" seventy-five feet, and those 200-feet, below. Originally the dome and its attending spaces below were open to the public. For a time during the 1920's the thirty-seventh through thirty-ninth floors were home to the *Stratosphere*, a swanky restaurant and lounge. On the fortieth floor could be found an observatory which provided unmatched views of Chicago and Lake Michigan. Access was, and still is, provided by a private *circular* elevator entered at the thirty-fifth floor. Currently, a host of small businesses rent out these penthouse floors with the top-most fortieth being occupied as conference space by a noted architectural firm. Outside, rooftop terraces for strolling and taking in the views and lake breezes also ringed the

building at the twenty-fourth and twenty-sixth floors. Being a tenant of the Jewelers Building offered delightful opportunities; Tenants and their clients and guests could partake of exhilarating terrace excursions at will, an amenity almost unheard of in any other skyscraper. The Jewelers Building, if for nothing else, was a "laboratory skyscraper," testing the idea of housing a single retail trade at one location, testing the feasibility of a skyscraper parking garage, and testing the concept of allowing tenants access to it rooftop - an ordinarily inaccessible area.

Architects Frederick J. Thielbar (1866-1941) and John Reed Fugard (1886-1968) were responsible for the design of the Jewelers Building. Thielbar, born in Peoria, Illinois, studied architecture at the University of Illinois eventually becoming a partner in the firm of Holabird & Roche. Fugard studied engineering also at the University of Illinois and graduated in 1910. The firm of Thielbar & Fugard, founded in 1925, produced much notable work but nothing taller or more whimsical than the Jewelers Building.

Also associated with the project were architects Joachim Giaver and Frederick Dinkelberg. Before establishing their partnership, Giaver and Dinkelberg were, for many years, in the employ of D.H. Burnham & Company.

Savoy-Plaza Hotel

New York City

McKim, Mead & White, New York City

1927

This was one of the finest and most luxurious hotels ever constructed, and, unfortunately, ever demolished.³⁰² Completed on October 1st, 1927, the Savoy-Plaza opened during the height of the Roaring Twenties - two years before the stock market crash and the beginning of the Great Depression. It contained 1,000 rooms and topped thirty-three floors, 420 feet. Its architectural style was based upon French Renaissance sources. Despite its French style, the Savoy-Plaza Hotel was named after the Savoy family of Medieval Italy, a wealthy and powerful clan that ruled there until the 1870's.

Once located on Fifth Avenue and 59th Street, this landmark hotel was faced with stone, brick, and terra-cotta. Its facades were symmetrical and they sported balustrades, and giant urns. An elegant arcade, with Ionic pilasters, graced the hotel's Fifth Avenue side and marked the location of its many smart shops. A prominent hip roof with dozens of dormers and two enormous chimneys terminated the building.

In the basement of the Savoy-Plaza were located the building's mechanical equipment, kitchen, laundry, and other hotel services. The first floor contained the main lobby, elevator lobby, the main dining room, lounge and large corridors that served the retail establishments which also ringed the hotel's exterior. The second floor held private dining rooms, shops, a tea room and a banquet hall. Floors three through thirty held well-appointed guest rooms.

Tucked into the building's large hip roof were apartments for the maids, a valet shop, a cafeteria, and separated from the domestic help were penthouse apartments for the guests. People moved through the building by means of eight passenger elevators, and two other elevators that served the commercial shops on the first and second floors.

Russ Building

San Francisco

George Kelham, San Francisco

1927

A powerful architectural statement in San Francisco's financial district, the thirty-one story Russ Building has been a landmark since its completion on September 1, 1927. Along with the twenty-six story Pacific Telephone & Telegraph Building, also standing 435 feet above the sidewalk, these two skyscrapers dually held the record as San Francisco's tallest until the mid-1960's when many new, and taller, towers arose.

In plan the Russ Building is E-shaped, and from its principal facade on Montgomery Street, it rises cliff-like into the sky. Exterior ornamentation borrows from Gothic Europe, but is subdued and not as flamboyant it might have been. The overall handling of forms, sensitive tower massing and detailing is nothing short of masterful. A central entrance leads to an impressive three-story high lobby of Gothic arches and pendant lamps. The Russ offered its tenants San Francisco's first parking garage - within a skyscraper.



(217) Russ Building

The landmark Russ Building was indirectly named after the German-born settler and real estate entrepreneur Emanuel Charles Christian Russ (1795-1857) and his descendants. Russ immigrated to New York in 1832 eventually arriving in San Francisco in 1847. He purchased large tracts of land in what is now San Francisco's financial district; over time six generations of the Russ family have retained at least some control of this real estate. The Russ House, one of the city's most celebrated hotels of the nineteenth century formerly occupied the site of the thirty-one story Russ Building.

At night he trekked Downtown to hawk newspapers on street corners, sometimes having to fight other newsboys for a good location. The best spot, he said, was in front of a new building at Broad and High that opened in 1927 – the American Insurance Union Citadel, now known as the Le Veque Tower.³⁰³

The first object to impress the visitor to Columbus is the A.I.U. Citadel, or to be more explicit, the Citadel of the American Insurance Union. It rises in its white majesty high above all other buildings. In the nighttime, the beacon, blazing from its summit, is easily mistaken by the traveler, at a distance, for a celestial body – a star of the first magnitude.³⁰⁴

American Insurance Union Citadel

Columbus

C. Howard Crane, Detroit

1927

The American Insurance Union was formed in Columbus, Ohio in 1894 as a "fraternal insurance company, secret society and social club." Its founder was John Jacob Lentz (1856-1931), an attorney, Ohio Representative, and local businessman. Lentz served as president of the organization until his death and was instrumental in the construction of the Citadel. As planned, the building would house the office operations of the organization and the insurance company, but more importantly, it would act as symbolic headquarters of the "society" and come to serve as an icon for the city of Columbus.

As originally planned, the Citadel included three main components: a 47-story office tower with 353,768 rentable square feet, the 4,000 seat Keith-Albee Theater, and the 600-room Deshler-Wallick Hotel. The development measured 188 feet along each Broad and Front streets, and rose to an ultimate height of 555 feet.

Groundbreaking occurred on September 23rd, 1924, with excavation commencing soon after. Forty-four caissons, sunk 114 feet to bedrock, were used for the tower's foundation. The Citadel's cornerstone was laid February 13th, 1926 while the building's steel frame, which would ultimately weigh 10,000 tons, began to rise above the sidewalk. Some sixty contracting companies contributed to the construction and to the installation of over one-hundred miles of electrical wire, 137,000 feet of heating pipe for thousands of radiators, sixty-seven electrical motors, fourteen-thousand electrical outlets, and 1,756 windows. Nineteen months later, on September 21st, 1927, the \$7.8 million American Insurance Union Citadel was dedicated. On that day the telescoping office tower, braced between two eighteen-story wings, was officially proclaimed the tallest point in Columbus and the "Fifth Tallest Building in the World."

The American Insurance Union initially occupied floors nineteen and twenty with the remainder of the tower let out to other tenants. An executive dining room, aptly named the Mid-Air Club – its sponsors were local businessmen / aviators – was located on the forty-third floor. The Citadel's forty-fourth floor eight-sided observatory was opened to the public where sensational views of the city and countryside could be had for twenty-five cents. The enclosed observatory with its twenty-four floor-to-ceiling windows was augmented by an exterior viewing balcony at the forty-sixth floor level reached only by metal ladder and undertaken by only the bravest.

Architecturally, the American Insurance Union Citadel is a modern, albeit romanticized, interpretation of the Byzantine. This Mediterranean-based style, most often characterized by religious buildings of the fourth through thirteenth centuries, is here lifted to improbable heights for the glorification of an American insurance company. The Citadel was an instant sensation, draped in cream-colored terra-cotta and sporting a dazzling array of forbidding statuary near its summit. Eagles with twenty-two-foot wing spread, twenty-six-foot-tall bearded giants, guardian angles, and various statuary groups peer down from a level 495 feet above the sidewalk. The top of the Citadel features an eight-sided bartizan topped by a dome encrusted with heraldic imagery, and walls braced by helmeted sentries. Just below the dome are sets of loop windows (the long, narrow, vertical openings cut into a medieval wall from which slings and arrows could be dispensed) which lend credence to the term *citadel*. At the skyscraper's dedication Albert Bushnell Hart, Professor Emeritus of Government at Harvard University, attempted to explain the building's strange medieval reference in its name:

That word "Citadel" has a peculiar significance as the architectural culmination of a great humanitarian institution. In the old days of strong fortifications such cities as Nuremberg, Chester and Quebec were defended, first of all, by a surrounding wall, the foundations of which were protected by a moat. Within that wall was added, as a second line of defense, a Citadel, such as the lordly castle still standing inside the wall of that famous fortress, Carcassonne, in southern France. There the garrison could hold on that inner line of endurance. The name of Citadel is especially appropriate as a watchword of a great life insurance company; for millions of families in the United States protect themselves, from the "terror by night and the destruction that wasteth at noonday," through this defensive institution.³⁰⁵

The skyscraper-Citadel's interior was impressive and featured ample supplies of Italian and Belgian marbles, bronze and mosaics in all public areas. The lobby's marble floor holds a bronze plaque bearing the horoscope of the building and showing the positions of the planets when the building's cornerstone was laid.

Since its completion, the American Insurance Union Citadel has been skillfully lighted each evening to accentuate its best architectural features. Reportedly visible for over twenty miles, its chalky terra-cotta cladding provides a vivid contrast to the murky darkness. Initially the tower's four corner turrets were mounted with powerful beacons as guides to nighttime aviators. An advertisement, sponsored by the well respected Northwestern Terra Cotta Company of Chicago, the supplier of the building's terra-cotta wrapping, features an image of the just-completed Citadel with the accompanying text:

Northwestern Floodlighting

The value of Northwestern Terra Cotta for floodlighting purposes is unsurpassed.

Textures and finishes are designed especially by Northwestern to secure the greatest degree of illumination at the least cost for electric current.

This use of floodlighting has a direct bearing upon the value of Northwestern Terra Cotta structures in color effects-because the beauty of color treatments when illuminated at night is even greater than their charm in the daytime.³⁰⁶

At this time other remarkable skyscrapers, also clad with Northwestern Terra Cotta, were likewise lighted: the Wrigley Building, Jewelers, and the Pittsfield in Chicago, and the

Union Central Life in Cincinnati. Columbus would not be left behind other Midwestern cities.

Much of the theatricality involved with the American Insurance Union Citadel, the flamboyant statuary and its very name - *Citadel*, have to do with the building's sponsor and the mysteries of the "secret society" itself. But partial credit must also be attributed to its architect, C. Howard Crane (1885-1952). Crane was one of America's preeminent movie palace designers of the 1920's and 1930's and is credited with designing 325 of these throughout the United States, Canada, and Great Britain. Certainly, some of the grandiose palaces filled with exotic imagery made the American Insurance Union Citadel appear rather meager by comparison. Crane, born in Hartford, Connecticut, moved to Detroit and worked in the office of Albert Kahn. In 1909, C. Howard Crane began his own architectural practice after which he was responsible for a number of significant commissions there including Orchestra Hall for the Detroit Symphony (1919).

As a consequence of the Depression, the American Insurance Union failed, but was reorganized as the American Insurance Union, Inc. in 1931. Despite that, the insurance company went into receivership in February, 1934, and John Lentz's "fraternal insurance company, secret society and social club" was no more. In 1945, Columbus' greatest skyscraper was purchased by Leslie L. LeVeque and John Lincoln and was subsequently renamed the LeVeque-Lincoln Tower.

Pittsfield Building

Chicago

Graham, Anderson, Probst & White, Chicago

1927

Upon its completion, this skyscraper ranked Chicago's tallest. Standing at thirty-eight stories, 557 feet it easily towered over most Chicago skyscrapers and became the *building to top* by other contestants in the race to the sky.³⁰⁷ Here was the tower that reigned over Prohibition Era Chicago, the Roaring Twenties, and the Thursday Wall Street termed Black. The elevated electric trains screeched and rumbled fifteen feet from its west wall and street cars clamored on its north.³⁰⁸ Its shadowed front entrance teemed with taxis, paper boys, shoe shiners, and oversized whirling glass doors. This was the home of brokers, insurers, accountants, and especially those of the medical trades. It was a tower of numbers – of one's stock prices, of one's insurance quotes, of one's net worth, and of one's blood pressure.

An area of downtown Chicago along Wabash and between Washington and Monroe Streets is still, after a century, known as Jeweler's Row. The Pittsfield Building stands on the north edge of this business district, a neighborhood of some twenty-four buildings, most housing jewelers and jewelry manufacturers. Generously scattered around the Row are also other small businesses, craftsmen, and a variety of medical offices. Still, the jewelry trade holds sway here counting more than 350 jewelry-connected businesses. Some of these still call the Pittsfield home.

The Pittsfield Building was constructed by a business syndicate, the Marshall Field Estate, as an investment vehicle – a \$5.5 million vehicle with three basements. It was named for the hamlet in Massachusetts in which the business titan Marshall Field was first employed, a significant event that in many ways would later govern the fate of Chicago. Architecturally the Pittsfield Building's exterior is a loose interpretation of the

Gothic style. Its exterior walls are dressed with polished black granite, cream-colored Indiana limestone, and over 3,100 glass windows. The Pittsfield is truly a delightful vestige of 'Twenties Chicago

The Pittsfield Building's footprint measures 163 feet along Washington Street and 120 feet along Wabash Avenue. Its "base," the higher stories of which are U-shaped, is composed of floors one through twenty-three. Tower floors, those from the twenty-fourth through the thirty-fifth, are transitional and cruciform in plan.³⁰⁹ The penthouse levels, those on floors thirty-six through thirty-eight form a small rectangle.³¹⁰ As a final flourish a pronounced copper-clad hip roof (now green) was included, complete with a thirty-foot chimney stack. The building's overall massing offers an altogether pleasing, and easily identifiable, profile on the skyline.

All interior public areas of the Pittsfield's first floor, the elevator lobbies - fourteen passenger elevators serve the building - and a five-story shopping arcade are simply splendid. Eclectic by design, still a hint of the Moorish style sets the tone. It seems that in these spaces time has stood still as elaborate decoration abounds. Polished brass trimmings surround the visitor. Chandeliers and coffered ceilings impress overhead while marble floors glisten under foot. Here is a mid-east "Alhambra" for a mid-west skyscraper.

Fred F. French Building

New York City

H. Douglas Ives of Fred F. French Company, New York City

Sloan & Robertson, New York City

1927

This building was the headquarters of one of the most successful New York real estate firms during the first half of the twentieth century. It stands on Fifth Avenue at Forty-Fifth Street and rises to a height of thirty-five stories, 429 feet. On a site measuring 200 by 79 feet, its shorter side on Fifth, the skyscraper rises like some Aztec temple. Many setbacks of varying shapes and sizes pile up to a singular shaft, a brave tower that emerges from the chiseled mass below. The magic begins when the eye drifts upward to a perpetual exhibit of Art Deco mastery – a display perhaps best viewed from a neighboring skyscraper.

The materials that hold the French's facades together are orange brick and polychrome terra-cotta. Composed on all sides are colorful tile friezes featuring zodiacal, mythical, and allegorical images. These carefully portray sunbursts (hope, progress), winged griffins (integrity, vigilance), beehives with hovering golden bees (thrift, industry), and a host of other quizzical vignettes – many open to interpretation. Mercury, the ancient Roman's messenger god and deity of commerce also figures prominently. A delightful extravaganza measuring some twenty-eight feet wide by ten feet high is positioned at the tower's summit. A tapestry of strong color is composed into a tight design featuring a central sunburst surrounded by mythological creatures and "secret patterns." The building's original owner, it is said, dabbled in the occult.

Born in New York City, Frederick F. French (1883-1936) was a successful real estate developer. He was the builder of apartment and office towers and large scale residential developments in Manhattan. In 1929, his company even planned to erect a 100-story office tower on the east side of Sixth Avenue between Forty-third and Forty-fourth

Streets. The stock market crash of October 1929 squashed any hope for this project. A namesake building did materialize, however, and it was supervised closely by Mr. French, after all, his company built it.

H. Douglas Ives (1888-1945) was born in Toronto, and prior to World War I he established an architectural practice in New York City. Later, he found himself in the employ of Cass Gilbert. Eventually gravitating to the Fred F. French Company, he achieved the status of chief designer. Vital to this skyscraper project, his contributions were not his alone; some were those of his boss. At completion, critics favorably treated the Fred F. French Building. It was called a setback skyscraper of the first order, a building whose massing was predestined by the New York Zoning Ordinance of 1916. And it was big. Some 5,000 tons of steel were used. Five million bricks, 1,800 windows, and 1,700 doors were installed. Originally five high-rise elevators served floors seventeen to thirty-five. Four other passenger elevators served the lobby to the sixteenth. Over three thousand people work in the building each day.

Mather Tower

Chicago

Herbert H. Riddle, Chicago
1928

The sponsor of this skyscraping needle was Alonzo C. Mather (d.1941), a Chicago industrialist and philanthropist. A native New Yorker, Mather arrived in Chicago in 1875, shortly after its devastating fire four years earlier. He founded a wholesale mercantile business, developed real estate, and in 1881 formed the Mather Stock Car Company. The Mather Stock Car Company manufactured rail cars outfitted to humanely transport livestock, and refrigerator cars for the transportation of meat. Chicago, then, was accurately portrayed as *the capitol of the meatpacking industry, the railroad hub of the country*. Chicago was fertile ground for a man like Mather. After finding success, Mather chose, like so many prominent businessmen before him, to erect a skyscraper. Mather called upon a man named Riddle.

Herbert Hugh Riddle (1875-1939) was a native Chicagoan who entered the architecture program at the Massachusetts Institute of Technology in 1896. He graduated three years later, returned to Chicago, and in 1905 formed a partnership with his brother, also an architect. Their practice, Riddle & Riddle, principally revolved around the sphere of greater Chicago. Until 1927 they produced no skyscrapers.

A site with dynamic city views and a commanding vista of the Chicago River was Mather's target. He acquired his parcel, a plat measuring sixty-five feet wide along Wacker Drive, by 100 feet deep. After two years of construction and a handsome expenditure, a spectacular building lifted into the sky. Mather Tower stood at forty-two floors, 519 feet. Its glass lantern, the apex of the Mather Tower, marked Chicago's second tallest building.³¹¹

This skyscraper was rocket-like. No one could recall such a thin skyscraper, a skyscraper with such a tiny footprint (in relative terms), a skyscraper without the "big shoulders" that Chicago was accustomed to. Riddle drew architectural inspiration from Gothic Europe for the tower's exterior, and employed a classical vocabulary for the public areas of the interior. The whole of the skyscraper's front displayed a tight coat of white terracotta. It gleamed each day.

The disposition of the building begins with a rectangular base, the lower half that rises without change. Abruptly, at the twenty-fifth floor, floors are reconfigured into an octagonal plan. At Mather Tower even small firms can claim to occupy whole floors, their employees are able to enjoy multiple views from their desk chairs and no one is more than fifteen feet from a 500-foot tumble. Here the floors measure an intimate forty-two feet across – the smallest floor space per floor of any Chicago skyscraper. This feat was achieved with superior engineering skills and extensive wind bracing. Only six elevators service the whole building.

The Mather Tower is at once delicate and graceful, challenging yet romantic. It is an altogether handsome skyscraper, a tower whose top six floors are washed with light and whose rooftop lantern is ablaze after dark. Mather Tower was Riddle's tallest and most celebrated commission. So satisfied was Riddle, he and his firm chose to practice architecture high in the tower, their headquarters for several years.



Chicago's New Near North Side
Wacker Drive and Michigan Ave.

(218) A delightful skyscraper ensemble is presented here: The Mather Tower is tallest and to its left is the London Guaranty and Accident Building (Alfred S. Alschuler, 1923) with its famous temple top. To the far left is the thirty-five story, 395-foot tall 333 North Michigan Building (Holabird & Root, 1928), and to the far right is the Carbide and Carbon Building (Burnham Brothers, 1929).



(219)

Detroit's Penobscot Building looms in the center while the Guardian Building (Smith, Hinchman & Grylls, 1929) flanks its left and the Dime Bank (D.H. Burnham, 1913) stands to its right front.

A graceful tower of steel and brick and stone...its lofty facades stand a worthy monument of man's progress upward from his primitive state. This towering structure typifies the confidence in a great destiny that is present-day Detroit. Every factor of fine materials, and the highest constructive ability that unstinted expenditure of capital may command, has gone into the building in an effort to make the perfect expression of an ideal.³¹²

Penobscot Building

Detroit

Smith, Hinchman & Grylls, Detroit

1928

When completed the Penobscot Building seized the title of Detroit's tallest building, an honor it held until 1977.³¹³ Furthermore, with the exception of only three buildings in New York, the Penobscot was the tallest in the country in 1928.³¹⁴ Soon taller entries in Chicago, Cleveland, and elsewhere would surface later but for that one shining moment

or so the Penobscot stood mighty proud.

Squarely anchored in the center of downtown Detroit the Penobscot Building, rising forty-seven floors, 557 feet tall, was the traditional architectural symbol of the city by night and day. The Penobscot Building's skillful massing includes a seven-story base supporting an H-shaped shaft that rises to the thirtieth floor. Here the building's mass is chiseled into a series of setbacks culminating in a one hundred-foot tall steel mast topped by a powerful aviation beacon.³¹⁵ Originally the forty-seventh floor embraced a public observatory from which the mighty industrial city could be viewed. The Penobscot's legendary massing even inspired the noted Hugh Ferriss to depict this skyscraper as a mighty mountain in black chalk and to include this skyscraper in his storied portfolio.³¹⁶ In the 1920's this was considered an enviable honor by any skyscraper developer, architect, or city.

The Penobscot Building, originally costing \$8 million, is a classic Art Deco skyscraper. Its footprint is large measuring 152 by 138 feet affording ample area to display an abundance of Art Deco ornamentation. Its primary elevation faces Griswold and is marked by a three-story tall arched entrance with a recessed bank of revolving doors. American Indian motifs abound at or near the building's main entrance and decorate various other areas of the exterior. Etched and gilded letters, executed in a primitive script, spell "Penobscot Building" above the skyscraper's main entrance. The tower's base is wrapped with gray granite with the remaining exterior walls faced with cream-colored Indiana limestone. This skyscraper's interior is simply an Art Deco delight. Sunbursts, decorative panels, and streamline-carved granite trim contribute to the 1920's ambiance. Eighteen passenger elevators and one freight elevator service the Penobscot Building.

The sponsor of the Penobscot Building was Maine-born, Simon J. Murphy (1851-1926). He and his family moved to Detroit in 1866. Murphy was a lumber baron who was president of the Murphy Lumber Company, an operation that employed hundreds in various mills in many states. Drawing on his childhood home and no doubt recalled the Penobscot Bay, Murphy chose to name his planned skyscraper "Penobscot," a word whose origin is from the Abenaki Tribe (a people part of the much larger Algonquin Nation) meaning "it flows on the rocks." Tragically, Murphy died in 1926, two years before the completion of the great monument.

Niels Esperson Building

Houston

James Eberson, Chicago

1928

During its early years the Niels Esperson Building was one of the most prominent skyscrapers in Texas, indeed the whole South. Still standing in downtown Houston, it cuts a stepped profile against the newer, shiny glass boxes there and remains the legacy of a one-time immigrant turned oilman. The Esperson office tower stands thirty-one floors, 409 feet high and was Texas' tallest for no more than a year when it was eclipsed by the nearby thirty-seven story Gulf Building.³¹⁷ Today the Niels Esperson Building remains a somewhat diminutive downtown landmark (some forty Houston skyscrapers are taller) and a charming relic of the Roaring Twenties - Texas style.

There are millions of immigrant tales wedded to America's emergence as a financial power. Certainly one such story deserves repeating, that of Niels Peter Esperson (1857-

1922), a Danish immigrant. He arrived in New York in 1872, got married in 1893, and in 1904, with his wife Mellie, moved to Texas. Esperson, who amassed considerable wealth from mining, first in California and then in Colorado, found Texas no less accommodating. Esperson's financial acumen again excelled and he "was one of the pioneer developers in the Humble Oil Field."³¹⁸



(220) Niels Esperson Building. *American Commercial Buildings of Today*, R. W. Sexton, New York City: Architectural Book Publishing Company, Inc., 1928, p. 49.

After Niels' death his wife, Mellie (c.1870-1945), proceeded to amass a lucrative real estate portfolio; much of the land she controlled covered giant pools of oil. In 1926 she chose to honor her husband's business achievements by erecting a memorial to him in the form of a skyscraper, a prominent piece of architecture that also generated income. How very American.

Upon a parcel of land that Mellie Esperson owned in downtown Houston she chose an architect and ordered the erection of the Niels Esperson Building. After its completion Mellie secured a suite of offices on the twenty-fifth floor from which she could oversee her financial affairs.

The Niels Esperson Building was clothed in the style of architecture that modernists loved to hate. There is no doubt about its authenticity, it harkened back to the days of ancient Greece, and a case could be made that its design was more akin to lower Manhattan than to the Texas prairie.³¹⁹ The Niels Esperson Building rose not box-like but as a sculpted pile of stone in space. A set-back summit eloquently announced its vertical termination and proclaimed its supremacy on the Houston skyline. Setbacks were

adorned with a forest of stone urns and bronze "oil-burning" torcheres, all of which lead the eye up to a final extravaganza. The Choragic Monument of Lysicrates (c.334 B.C.E.), a commemorative structure of ancient Greece, was used as a model to top off this "temple that oil built." The six-story tower is covered with gold-leaf making this architectural ornament visible for miles. Its placement here is at once both gratuitous and appropriate, both derivative and heroic.

Inside, the style does not wane. Terra-cotta urns, much marble, and elaborately rendered bronze elevator doors still impress. Mellie Esperson called this skyscraper "half building and half monument."³²⁰ Before long, Mellie would build again, but this time in *her* honor.

Nineteen-forty-one marked the year Mellie Esperson's own skyscraper was completed. It rose adjacent to her "husband's" skyscraper but reached only nineteen stories. It too was designed by Chicago's John Eberson but it lacked much of the architectural bravura displayed by the earlier skyscraper.³²¹

John Eberson, the architect of the Niels Esperson Building, was a native of Austria who studied architecture in Vienna and Dresden, Germany. He migrated to America during the early years of the twentieth century and soon became a noted designer of atmospheric movie theaters. The fanciful architecture of 1920's movie palaces, exuding dreamy and exotic architecture, was a fitting prelude to the Esperson tower. Eberson's familiarity with styles based in the Orient, Islamic, Greek and Spanish genres delighted Mellie Esperson, and so he was commissioned. Though James Eberson designed dozens of theaters throughout the country (mostly in New York, and in the South), the Niels Esperson Building ranked as one of the tallest of his many commissions.

Industrial Trust Building

Providence

Walker and Gillette, New York City

George Frederic Hall, Providence

1928

This great cliff of a building was formally opened on October 1, 1928, almost exactly one year before the stock market crash of 1929 and the ensuing Depression years. The Industrial Trust Building was the product of the Roaring Twenties, and its design was bold, optimistic, and compelling. It was, and still is, an unrivaled tower on the skyline of Providence. A giant glass spherical lantern fixed atop the building is lighted nightly and is visible for miles throughout the city and its suburbs.

Still Providence's tallest skyscraper, the Industrial Trust Building stands twenty-six floors, 416 feet tall, and features ten passenger elevators. This is a building composed of many smaller "buildings," components that were seemingly fused together to produce one powerful architectural expression. In plan this skyscraper is rectangular with a central tower buttressed by six auxiliary wings. Its steel frame supports exterior walls of cream-colored limestone that display carved friezes depicting the history of Rhode Island. An imposing arched entrance of glass is situated symmetrically on the building's main facade. Visitors enter and immediately walk up a flight of stairs leading into the main banking room of the Industrial Trust Company.

The main banking room was executed in an Empire style relying heavily on Greek inspiration for aesthetic direction. Included are sixteen, Ionic, two-story-tall columns that do

add dignity and whimsy to this important public space. Between the black marble columns' volutes are displayed larger-than-life examples of American coinage, common currency at the time of the skyscraper's completion. Beyond the antique references this room is replete with light fixtures, bank counters and their screens, relief carvings and clocks executed in the Art Deco style. Furthermore, this room's ceiling features a centrally placed terra-cotta medallion that depicts astrological symbols of the constellations. Suspended from this is a large Art Deco chandelier, a fixture designed to recall – in miniature – the skyscraper's profile.

Panhellenic Tower

New York City

John Mead Howells, New York City

1928

Still residing in Beekman, a fashionable neighborhood on Manhattan's East Side, is the landmark Panhellenic Tower. At first, the twenty-six story private hotel seemed somewhat ill placed being surrounded by lavishly appointed three and four-story townhouses. But before long other luxury residential towers would keep the Panhellenic Tower company.

Originally constructed as a hotel for women – for college educated, sorority-member women that is – the Panhellenic derives its unusual name from "Greek letter societies" or sororities in more modern parlance. At completion, the Tower was served by three passenger elevators, contained 400 rooms, a roof solarium, and a celebrated cocktail lounge. Its city views from upper floors were unparalleled and they awed the Panhellenic's guests.

In a like manner the Panhellenic Tower displayed *itself* to the rest of Manhattan.

The Panhellenic was, and of course is still, a 1920's masterpiece of tapers, champfers, pleats and postures. With Gothic-like verticality the orange brick and terra-cotta building rises to multiple setbacks and a filigreed summit. Shade and shadow define the Tower – they play a major part in this skyscraper's design. Shadows step out from, and recede back into, the building's crevices. Shadows search out its indentations for dramatic effect and are rarely stymied. Its deeply inset windows and pronounced angled corners mark a building more sculpted than constructed.

Across the street from where the first President of the United States took oath of office, and on one of the most valuable pieces of land in the world, a new and magnificent structure now towers far into the air. Within the shadow of its casting are the world's most famous financial headquarters. Here will stand another landmark created by master minds of the architectural and engineering professions-emphasizing modern beauty and efficient design.³²²

Equitable Trust Building

New York City

Trowbridge & Livingston, New York City

1928

The Equitable Trust Company, founded in 1871 and *not* to be confused with the Equitable Life Assurance Company, completed this skyscraper in May of 1928. The Trust's cor-

porate and banking offices were located in this giant building as well as the offices of dozens of other businesses.

In order for the Equitable Trust to go up, another building had to come down. The Mills Building, at 35 Wall Street, was sacrificed. An early skyscraper of 10 stories, the Mills was constructed in 1883 from the plans of George B. Post. At its completion, this was the world's largest *office building*. It fronted 25 feet on Wall Street, 175 feet on Broad, and 150 feet on Exchange Place. It featured steam-driven elevators, had 330 offices, and cost \$4 million – a staggering sum for 1883. Demolition took one year. The Mills' presence can still be sensed as the Equitable Trust occupies the identical and irregular parcel of its predecessor.



(221) Equitable Trust Company Building. *American Commercial Buildings of Today*, R. W. Sexton, New York City: Architectural Book Publishing Company, Inc., 1928, p. 226.

By rising 42 stories, 550 feet, the magisterial Equitable Trust was destined to make a major contribution to the skyline of lower Manhattan. It recalls the work of early Egyptian and Mesopotamian architecture, principally the ziggurat form. The great Pyramid of Zoser at Sakkara (Egypt) was completed in 2778 B.C.E. and first comes to mind. Its battered walls stand 200 feet, roughly equivalent to the Equitable's top five tiers, also with battered walls. The Equitable Trust's many-terraced mountain of bright white granite and Indiana limestone cuts a distinctive profile standing among nearby, but lesser, giants.

The location of this skyscraper was, and remains still, in the epicenter of world banking, finance, and equity trading. It occupies a peculiar site that fronts on Broad Street and borders Exchange Place. To the north extends a "finger" of the building measuring only 28 feet wide and standing some 20 floors. This appendage pushed and squeezed to front on Wall Street giving the building a coveted Wall Street presence, and consequently, much added prestige. The accompanying view of the Equitable Trust Building clearly shows the J. P. Morgan & Co. corporate offices on the corner of Wall and Broad Streets. Just 15 years earlier architects Trowbridge and Livingston designed this 5-story banking citadel for money-titan Morgan. His offices are still menacingly hovered-over by the Equitable Trust.

Upon opening, the Equitable Trust's restrained exterior prepared no one for its Spanish Renaissance lobby and banking offices. Originally, a forest of marble-sheathed columns greeted customers and clients in the main banking room, a 35-foot high space. Dark timber ceilings with medieval-inspired chandeliers contrasted with creamy-white marble walls. Spanish tiles and black-painted cast iron pedestrian gates and teller cages completed the illusion. Much of this was erased through multiple renovations.

Only two years after completing its office tower, the Equitable Trust Company was acquired by the Chase National Bank, also of New York. The results were the creation of the world's largest bank and the rendering into oblivion the name "Equitable Trust Company." Today this skyscraper is simply referred to by its address - 15 Broad Street.

In the magnificent Fisher Building recently completed in Detroit, the new Carnegie Beam Sections were selected to form the giant framework. While no record was attempted, this splendid structure, with its 28-story tower, and involving the use of 12,500 tons of steel, was completed in thirteen months. This fact is significant in that it indicates the ease and simplicity with which the new Carnegie Beams may be fabricated and erected.³²³

Fisher Building

Detroit

Albert Kahn, Detroit

1928

The accomplished American architect Albert Kahn, designer of over two thousand factories worldwide and a host of high-profile buildings, was responsible for this skyscraper. For years his clients were none other than the most noteworthy industrialists of the age, men like Henry Ford, the Dodge brothers, and Walter Chrysler. But In 1925, Kahn was summoned to create a skyscraper, the tallest structure he would come to design, for the seven Fisher brothers of Detroit.

Founded in 1908, Fisher and Company, manufactured auto frames in Detroit. The Company sought a presence on the Detroit skyline, a prestige attainable only with a tall building. Albert Kahn responded with an eclectic structure that rose twenty-eight floors, 420 feet.

Besides the office component a shopping arcade was included. A barrel vaulted space passed through the building's base and reached upward forty-four feet. A gold leaf ceiling featured paintings from nature, including nudes, eagles, and bronze highlighting. For decorative purposes some 420 tons of bronze were used throughout the building. Forty-one shades of marble were specified for the project.

The Fisher Building's exterior was unmistakable from afar. A graceful, green tiled hip roof brings finality to the upward sweep of the stone piers. The first three floors were covered with Minnesota granite and the remainder with white marble from Maryland. The Fisher Building's footprint measures 58,639 square feet – total. The tower portion, at the junction of two low-rise wings, measures 5,379 square feet on the twenty-sixth floor, a size reduction of 91 per cent. The bulk of the building was reduced in favor of height and the accompanying notoriety a skyscraper bestows. In 1928 the Fisher Building was honored by the Architectural League of New York as that year's most beautiful building.

Dade County Courthouse

Miami

A. Ten Eyck Brown, Atlanta

August Geiger, Miami

1928



(222) Dade County Court House

Classically inspired, this impressive structure ruled the sky over Miami for decades after its completion on September 6th, 1928. Four years of work culminated in this twenty-seven story, 325 foot-tall pile of steel and stone.

Buried deep within this structure is a former courthouse that was completed in 1904. The new skyscraper was constructed around/atop the earlier building, a stone neoclassical monument in its own right. The current courthouse is faced with stone and sports Doric and Corinthian columns and pilasters. Pronounced setbacks reduce the building's bulk as it rises upward creating an impressive and distinctive profile. High above, the skyscraper is topped by an eight-sided pyramid. Nightly, the Dade County Courthouse is floodlighted and visible for miles throughout greater Miami.

Los Angeles City Hall

Los Angeles

Austin, Parkinson and Martin, Los Angeles

1928

For decades the city of Los Angeles existed under what many considered an unfair law, a law that artificially capped building heights at no more than 150 feet. Lawmakers reasoned that seismic activity posed enough threat to their city as it did earlier to San Francisco. The burned out hulk of the Call Building and others there was seared in the minds of politicians and architects alike.³²⁴ Despite all this, one building taller than 150 feet did eek through. It poked itself above the sleepy skyline, and was allowed to tower over a vast metropolitan area of three million. Only by the votes of Angelinos was the height law temporarily repealed, dashed only for a new city hall. It was not until 1957 when skyscraper technology, with advanced seismic engineering, was deemed adequate enough to permanently remove the height limitation. The result was what might have been expected, hundreds of buildings rocketed passed the 150-foot mark and gave Los Angeles a mighty skyline.

The Los Angeles City Hall was announced completed on April 26th, 1928, and it reigned supreme at twenty-nine floors, 452 feet above the sidewalk. Architects John C. Austin, John Parkinson and Albert C. Martin answered the call for a new municipal office building with a structure that has since become a symbol of Los Angeles. It is as recognizable and inexorably tied to Los Angeles as the Empire State Building is to New York. Conceptually the City Hall is a central tower flanked by two mid-rise wings all of which rises behind a stone forecourt. The tower, a muscular and swaggering obelisk, is one of the finest proportioned of its kind. The positioning of a step pyramid atop this tower results in both a potent visual force and a wholly appropriate method of terminating this setback building's vertical rise. Whether an intentional allusion to Zoser's step pyramid at Sakkara (2778 B.C.E.), or just a little bit more than a meaningless architectural gesture, this summit does please.

Architecturally the Los Angeles City Hall is a strange hybrid indeed and borrows from Greek, Roman, Romanesque, Spanish and Italian Renaissance sources; the building's diversity mirrors the cosmopolitanism of the city it towers over. City Hall's base is dressed with light gray California granite while above all floors are wrapped with a light gray terra-cotta. The whole of the building's exterior and interior abounds with sculpture and murals.

Los Angeles' City Hall was seen as a giant when completed. It was far taller and it out-sized every other structure downtown. The building's volume approximates twelve million cubic feet with some twenty acres - 871,200 square feet - of floor space. The building is served by eleven elevators.



(223) Los Angeles City Hall



(224) New York Life Building

New York Life Insurance Building

New York City

Cass Gilbert, New York City

1928

A giant building for a giant company – a fit description of both—this was. The New York Life, one of New York's great skyscrapers, a structure that stands tall at forty-four floors, 615 feet. With other landmark skyscrapers it completes a "string of pearls" around Madison Square, its white limestone walls contrasting the deep emerald green of the park. At night the building's complicated crown and eight-sided "steeple" are brightly lighted and are visible for miles through the canyons of Manhattan, and the streets of Brooklyn, Queens and beyond.

It was into this building that, in the mid-twenties, New York Life anticipated being after their relocation from their Broadway headquarters downtown. That structure was completed in 1896 and by the "roaring twenties" it was painfully clear that larger quarters would soon be needed. The talented and prolific St. Paul-based architect, Cass Gilbert, was tapped for this Madison Square corporate project. He was adept at this type of commission since he established himself as a successful designer of prominent government buildings, libraries and skyscrapers. The New York Life Insurance Building would be one of his final commissions and his last skyscraper. Upon the building's open-

ing Gilbert was seventy years old.

Completion of the new Madison Avenue building required almost four years of toil, much of it in demolition and excavation. At this spot in Manhattan great flows of solid granite come quite close to the surface making their removal excruciatingly difficult and slow. Excavating ceased at seventy-two feet below grade for the width and length of an entire block. This was one of the largest granite removals ever in New York City.

The New York Life Insurance Company proudly announced their headquarters completed on November 15th, 1928. New York Life, an old organization of integrity and humanity would now be housed in a building of integrity and humanity, in a special place, a home, a secure mountain of stone. The building was huge; twenty-one million cubic feet were contained within. Ten thousand office workers and visitors would occupy over one million square feet of floor space, and thirty-six elevators would serve all. Giant chandeliers graced a giant lobby with marble floors and walls, coffered ceilings, and bronze trimmings.

Noted exterior features are its skillful massing, its quarry of creamy limestone, its rich use of neo-Gothic imagery, and of course the skyscraper's flamboyant top. At approximately the five hundred foot level begins one of the most dynamic of all skyscraper summits. Four substantial corner tourelles guard an ever-tapering eight-sided spire covered with gold leaf. A forest of steel columns and beams were used to secure this bauble to the super-structure below and brace it from within against the winds and eddies of Manhattan. Perched high above is an enticing little space that is glass enclosed, a Gothic-inspired lantern from which nightly shines white light in all directions. To a lesser extent the romance of the 1920's rests here – in this building, but to a greater degree the neo-Gothic genre is present and is embodied in this monumental skyscraper.

Home National Bank Building

Elgin

St. Louis Bank and Vault Company, St. Louis

1929

A somber opus by an out-of-town firm best describes this town's tallest and, for the time being, only skyscraper. Here, too, stands a significant and successful attempt at inserting a skyscraper into what was essentially a nineteenth century commercial strip. The Home National Bank Building still presides over this strip in downtown Elgin.

Elgin, Illinois, some forty-five miles northwest of Chicago, was known as the home to a large clock and watch factory, its products famous the world over. Elgin was also the headquarters of the Home National Bank, a more regional enterprise. By the end of the 1920's, the Bank was looking to expand its presence in Elgin's downtown. A design competition commenced and an Art Deco design from the firm of the St. Louis Bank and Vault Company of St. Louis was chosen.

Construction of the Home National Bank Building began in March 1928 with completion observed in May 1929. The skyscraper towered fifteen stories, 186 feet tall over Elgin. The underlying structure was a skeleton of steel and reinforced concrete. Bedford (Indiana) limestone and gray granite were employed for the exterior walls and trim. The skyscraper began its ascent from the sidewalk as a six-sided structure. At the eleventh floor a four-story block emerged to describe the building's summit. Two story-tall columns,

topped by carved eagles, helped to mark the main entrance. Exterior façade decoration included low-relief eagles, shields, and medallions. Just inside the lobby were two passenger elevators capable of whisking visitors to the top floor in only twenty seconds. The skyscraper's cost was \$800,000, a princely sum for a small town bank. Tragically, the Home National Bank Building would go into receivership in January 1932, a victim of the Great Depression.

In 1929 the Home National Bank built an instant landmark for the community, an imposing structure from whose top one can still see the skyscrapers of Chicago's Loop. The Home National Bank Building still stands in downtown Elgin and is currently known as the Elgin Tower.

*Wait till you see the pattern as a whole, how it glows through the murky shadows of soot laden Detroit atmosphere, how it flashes in the sunshine in the summer and even after its baptism of smoky air, still stands out amid its grimy surroundings with dauntless good cheer.*³²⁵

Guardian Building

Detroit

Smith, Hinchman & Grylls, Detroit

1929

The Guardian Union Group, a large and prominent Detroit bank, was formed in 1928 with the merger of the Union Trust Company and the National Bank of Commerce. Their joining required more office space and it dictated the construction of a new office structure, a skyscraper, a signature building to mark their spot on the Detroit skyline. In 1927 construction began in downtown Detroit for what was to become one of the grandest, most recognizable skyscrapers anywhere. Upon completion, the Guardian Building, then Detroit's second tallest, was called "the Cathedral of Finance."³²⁶ An apt label indeed: at the building's opening the Guardian Union Group ranked as Detroit's largest financial institution with assets of \$400 million, 40% of Detroit's total banking resources.

Detroit's Guardian Building stands forty stories, 482 feet from a base measuring eighty by 270 feet. In all the Guardian Building has 456,000 rentable square feet. The skyscraper was once widely known for its multiple and very powerful aviation beacons atop its roof. Nightly these marked the location of Detroit and were visible to airplane pilots over one hundred miles away.

The Guardian remains a magnificent Art Deco landmark, one of the most colorful skyscrapers ever erected. Exterior walls are composed of bright orange brick which are accented with geometric terra-cotta patterns of yellow, cream, blue, green, and vibrant red. Its signature "jewel-topped" crown glistens in the sunlight as it was meant to. The Guardian's interior is equally adorned. Its main lobby features a vaulted ceiling laid with Rockwood tile of many vivid colors. An Aztec motif carries through these spaces. Fantastic brick patterns abound on all sides and are complimented by flamboyant polychrome terra-cotta friezes.



(225) Guardian Building

Tragically, and due to the Great Depression, the Guardian Union Group went into receivership on February 14, 1932. The bank's glory was short lived, its banking empire evaporated. Although gone for over sixty years, the once-powerful bank is now remembered only by virtue of its one-time headquarters.

David Stott Building

Detroit

Donaldson & Meier, Detroit

1929

The end of the 1920's witnessed the sprinkling of skyscrapers through downtown Detroit. Completed then were the Book Tower in 1926, and the Penobscot and Fisher buildings in 1928. A truly remarkable office tower closed out the decade but in no way can it be considered less than the others. The David Stott Building was completed in 1929 and perhaps reflected the spirit of the age more successfully than the others.

David Stott (1853-1916) was an English-born businessman. He was the owner of the David Stott Flour Mills, a company he formed in 1879 which made him quite wealthy. Other Detroit-based concerns that Stott controlled were the Moorehead Manufacturing Company and the Stott Realty Company; he also served as secretary and treasurer of the Detroit Barrel Company. David Stott owned substantial amounts of real estate in downtown Detroit which also contributed to his overall wealth. But, it was the Stott Realty Company that actually built the skyscraper in honor of the company's founder twelve years after his passing.

This stand-alone office building pushes skyward thirty-eight stories, 436 feet. It was constructed with buff-colored brick, carnelian granite, and tan-colored terra-cotta. The masterful handling of the building's various components, its pleats and retreats inward, is

nothing short of masterful. The skyscraper's strong vertical lines are not visually "fractured" at setback levels, but rather, they join the vertical thrust quickly and adeptly on the next. These brick piers rise unbroken from top to bottom – the ultimate vertical rise, a rise without one dissenting line, a thing of beauty.

One possible source for the design of the David Stott Building was German Expressionism. Another might have been Eliel Saarinen's entry for the Chicago Tribune design competition of 1922--or perhaps both, or perhaps neither. What is certain is that at the completion of the David Stott Building Detroit was the recipient of a skyscraper of distinction.

The commission for the David Stott Building was awarded to the architects, John M. Donaldson (1854-1941) and Walter R. Meier (1887-1931). This skyscraper was the apex of their professional careers, and was their tallest project. Donaldson was born in Scotland and arrived in the United States as a boy. He studied architecture under the tutelage of leading firms in Detroit and continued his education in Germany and at the Ecole des Beaux-Arts in Paris. At age twenty-two Donaldson began his professional practice in Detroit, and by 1880 he formed a partnership with Henry J. Meier that lasted until Meier's death in 1917. Henry J. Meier's son, Walter R. Meier (1887-1931), stepped forward in 1917 to join the firm his father helped start. Walter, a Detroit native, studied architecture at Cornell University from which he graduated in 1911.

Baltimore Trust Building

Baltimore

Taylor & Fisher, Baltimore

Smith & May, Baltimore

1929



(226) The Baltimore Trust Building. Baltimore County Public Library.

When completed, this building was the tallest in Baltimore. Its thirty-four floors, 509 feet towered over downtown Baltimore as no other building had. Its presence is still felt throughout downtown, it has a big-city attitude, an urban and cosmopolitan character. This broad-shouldered office tower is one of the finest Art Deco skyscrapers in America; the Baltimore Trust's designers won an architectural medal for excellence in 1929.

From the nineteen-story office block springs a fifteen-story tower. Capping the tower is a large copper-clad "mansard roof," while the tower's four corners are accented by attenuated cones – also of copper. Other exterior materials include brick, marble, Indiana limestone, and glass. Lavish carvings and decoration fill interior and exterior walls. Art Deco designs, some based on Mayan sources, can be found on every surface of this great setback skyscraper. Streamlined light fixtures, lanterns, mailboxes, and elevator doors compliment Art Deco wall murals and mosaic floors.

Northern Life Tower

Seattle

Albertson, Wilson & Richardson, Seattle

1929

The landmark Northern Life Tower rates as one of the west coast's finest Art Deco skyscrapers. At completion it was Seattle's second tallest building rising twenty-seven stories, 318 feet above Third Avenue; currently over two dozen skyscrapers stand taller in Seattle.



(227) Northern Life Tower

The Northern Life Insurance Company was founded by D.B. and T.M. Morgan, Seattle businessmen who desired to construct a headquarters tower "finer than anything on the Pacific Coast." A budget of \$1.5 million was established and construction commenced in early 1927. As an example of one-upmanship the Morgan's calculated that their planned twenty-four story skyscraper would be just shy – *gauged according to sea level* – of the forty-two story L.C. Smith Building, Seattle's tallest and touted as "the tallest building west of the Mississippi." After careful recalculation it was decided that the Morgans' new insurance headquarters would stand twenty-seven floors. The result was as expected; the Northern Life Tower was one floor higher – *by sea level measurement* – than the L.C. Smith Building.

The Northern Life Tower's facades emphasize the vertical, and they feature wide primary piers and narrower secondary piers. Windows and spandrels are recessed from the tower's brick walls which progressively lighten in color as the building rises; a graded color palette creates the impression that even on an overcast day the height of the skyscraper still catches the fleeting rays of the sun. Each evening the Northern Life Tower was brilliantly illuminated by more than 200 floodlights making it visible for miles. By employing no less than six setbacks, architects A.H. Albertson, Joseph W. Wilson, and Paul Richardson created a masterful overall composition, a skillful balance of solids and voids.

Medinah Athletic Club Building

Chicago

Walter W. Ahlschlager, Chicago

1929

This tower is a truly bazaar concoction of Indiana limestone, concrete, steel, and glass. Its walls are rife with statuary, bas-reliefs, grotesques, arches, and giant medallions, all topped by a dome and a "minaret." Its architecture belies the fact that it is ten buildings in one. It can be, and has been, judged an affront to one's sensibilities, that it has confused and jumbled facades, that it is nothing more than a grab bag of parts and pieces topped by an old lady's hat. If it is true that eccentric clients produce eccentric buildings, then the Medinah Athletic Club Building gives credence to this adage. The building's sponsor was none other than Chicago's formidable 3,500-member Medinah Athletic Club, a "secret" organization of men who belonged to the *Ancient Arabic Order of Nobles of the Mystic Shrine*, also known as the Shriners.³²⁷

When the Medinah Athletic Club Building officially opened on April 15th, 1929, it served as the Shriner's office headquarters and it came equipped with athletic facilities, ballrooms, restaurants, reception halls, 440 exotic hotel rooms and more. This forty-two story skyscraper, masquerading as a rather splendid Moorish castle replete with battlemented parapets and scary carvings, was taller than its more celebrated neighbors – the Tribune Tower and the Wrigley Building. When completed, its 513-feet ranked it Chicago's twelfth tallest, far down the chart but more easily identifiable by Chicagoans – it's the only skyscraper topped by a beet-shaped dome.

The architect for this skyscraper's interior was Walter Ingstrup, a man whose design approach served the exotic wishes of his clients and whose sensibilities were certainly in step with the fantasy nature of the 1920's movie palaces. The Medinah's interior displayed an overwhelming middle-eastern motif with some Greek, Roman, Italian Renaissance and Egyptian designs included for good measure. There was the Neptune foun-

tain, the elaborate staircases and balconies, wood-carved ceilings, massive chandeliers, an elliptical ballroom with thirty-seven hand-painted original landscapes encircling the ceiling, crystal and bronze wall sconces, stenciled ceilings, an abundance of gold leaf, and strong color – lots of it. A twenty-five-meter, Majolica-tile-lined swimming pool was located on the fourteenth floor. The lighting throughout was particularly dramatic and contributed to the desired mystic aura.

Perhaps architect Ahlschlager's most idiosyncratic addition to the building's exterior occurs at the top. The Moorish-style dome and nearby chimney disguised as a minaret. The forty-foot-wide dome was constructed of concrete and then gilded. A spiral staircase leads from the forty-second floor up and into the dome's center where there is a glass cupola. The dome is punctured by eight openings from which all of Chicago could be viewed. This was never open to the public but as an observatory it must have been sensational. The original "minaret," adjacent to the dome, was truncated years ago, the top half removed probably due to age and subsequent weakening; unfortunately it now appears more like a chimney – the magic has gone.



(228) Medinah Club Building

In 1934, due to the difficulties caused by the Depression, the Medinah Athletic Club declared itself bankrupt. The Club vacated the skyscraper it built and called home for a scant five years. For decades afterward, various hotel chains owned and operated the

building as a hotel. After fifty-five years, some of which saw general neglect and inappropriate remodelings, the skyscraper was secured by investors who undertook an impressive \$130 million building restoration and renovation. Not only was the Medinah listed on the National Register of Historic Places, but it once again stands proud on elegant North Michigan Avenue. The dome was re-gilded and relit and for a dwindling few this skyscraper will always be the Medinah Athletic Club Building.

Sweeping across the mid western sky like a shimmering white finger, the beacon gave to downtown Chicago the excitement of a Hollywood opening. To all who came to the Windy City, by train or plane or automobile, it signaled that this was a place to be reckoned with, that here was power and pride, that here, in Willa Cather's phrase, were "lovely things...to live among.³²⁸

Palmolive Building

Chicago
Holabird & Root
1929



(229) Palmolive Building



(230) Palmolive Building featuring its famous beacon.

Lovely things indeed! Chicago's beloved Palmolive Building was the first skyscraper to be erected that broke from the thicket of towers in the Loop and set out on its own to make a name for itself, to make its own mark on the skyline and not be lost in the *mé-lange* of other "tall ones." It was built in what was then a primarily residential neighborhood, an area still known as the "Gold Coast" because of its mansions, tony shops, fine restaurants, and most of all the wealth of its residents. The neighborhood's buildings,

then, were predominantly low, lovely, and lavish. Into this rarified mix was put the Palmolive Building.

This company's history began in New York City, where in 1806, an English immigrant named William Colgate (d.1857) established a starch, soap and candle business. In 1866 Colgate & Company introduced a line of perfumes and essences, and only in 1873 did they introduce toothpaste. In Milwaukee, the B.J. Johnson Soap Company, founded in 1864, introduced Palmolive Soap in 1916, the success of which prompted the company to officially change its name to the Palmolive Company. In 1926, the Palmolive Company merged with Kansas City soap manufacturer, Peet Brothers, and was renamed the Palmolive-Peet Company. It was during the 1920's that the Company became Chicago-based, and truly global, establishing subsidiaries and manufacturing facilities in Europe, South America, and later Africa.

In the late 1920's the Palmolive-Peet Company sought new headquarters office space and found a Chicago site only two blocks from Lake Michigan's shore. The result was the swanky Palmolive Building – curiously *not* the Palmolive-Peet Building. This landmark skyscraper opened in April 1929 when eight of its floors were dedicated to Palmolive-Peet's management staff; the remainder was let out to "only the finest of tenants." Their company's new skyscraper ranked, for a brief time, Chicago's second tallest building. At thirty-seven stories and 565 feet, only the Chicago Temple Building was higher – and then by only four feet. Within months the 605-foot Chicago Board of Trade Building would eclipse them both.

The Art-Deco Palmolive Building is large but not threatening by virtue of its height and bulk. Its footprint measures 107 feet north-to-south and 231 feet east-to-west yielding a footprint of 24,717 square feet. From street to summit the Palmolive is setback six times, and beginning at the twenty-third floor the building tapers to only forty-six by 130 feet. This limestone-clad skyscraper is superbly proportioned and features deeply inset bays on the north and south facades resulting in visually dramatic vertical "channels." From the east or west the tower appears thin, elegant, and very charming.

The Palmolive Building's elegance and fame were not enough to cement Colgate-Palmolive to its namesake skyscraper for very long. In 1953, the multinational's name was changed to the now more familiar Colgate-Palmolive Company, and it relocated its headquarters to New York's Park Avenue.

The svelte style and elegant lines of this Gold Coast tower have charmed Chicagoans since its opening. But that which truly elevated this skyscraper to mythic proportions was its beguiling beam of light, the Palmolive Beacon. Above the building's roof, which measures 468 feet above the sidewalk, was constructed a 97-foot-tall steel mast surmounted by a rotating light. This Art Deco "finial" served as an aviator's navigational beacon and projected a single beam of light with the intensity of two-billion candlepower. This light beam was visible by aviators some three hundred miles from the Windy City and was regularly sighted by pilots above Cleveland, Ohio. In 1968, due to the completion of the 100-story John Hancock Center two blocks to the south, alterations were sought.³²⁹ The forty-five highest floors of the John Hancock Center boasted 705 apartments, many of which faced the Palmolive Building and its nightly light show. A metal shield was affixed to the beacon's south side to deflect the beam and assure it no longer raced through Hancock residents' living rooms and bedrooms. After other residential skyscrapers also surrounded the Palmolive Building the beam could no longer operate

as it had for the last half-century, and to the dismay of most Chicagoan's, the beam was extinguished in 1981. A replacement was installed, a non-rotating, steady-glowing bulb that in no way could replicate the romance of the original. Still, the Palmolive Building is just one of many things, of "lovely things," that Chicagoans do still "live among."

*Even among the towering buildings of mid-Manhattan, this magnificent structure will be a notable landmark because of its size and beauty. It will be the crowning achievement of the Park Avenue development plan fostered by the New York Central Railroad, beginning with the electrification of the Grand Central Terminal Yards in 1906.*³³⁰

New York Central Building

New York City

Warren & Wetmore, New York City

Julian C. Levi, New York City

1929

Few urban buildings, skyscrapers included, are as graceful and gracious as this. Here, public areas are magnificent, rich in detail and color, imbued with sensuous surfaces of foreign stones that carry the mind to other times and places. Here, hushed lobbies lighted by chandeliers once welcomed the railroad titans, the men who controlled the rails that moved millions. Here, a sometime fog-shrouded bauble continues to preside over that "street of dreams," sober Park Avenue. And here, romantic and proud, still reigns the New York Central Building.

This thirty-five-story building was constructed as the New York Central Railroad's executive offices and was hailed as the largest and tallest headquarters building of any railroad, anywhere. It rose as the result of a company, whose 1869 founding was orchestrated by Cornelius Vanderbilt, which sought the prestige and recognition only offered by a skyscraper. A location near Grand Central Terminal (Warren & Wetmore and Reed & Stem, 1913), also owned by the New York Central Railroad, was favored. Its home was placed to the north of Grand Central straddling two levels of subterranean rail yards and adjacent to a hive of activity - a transportation network of unexcelled complexity and unsurpassed civil engineering.

The New York Central Building and Grand Central Terminal are inextricably locked in an urban ballet. Great civic architecture conceived at an urban scale best defines these buildings – but it is *motion* that truly bonds them. Grand Central Terminal's statistics are staggering: 400,000 passengers pass through and 7,000 subways and trains stop here daily. Every twenty-four hours, 100,000 automobiles flow through the arched portals of the New York Central Building, emerging onto viaducts that skirt the magnificent station. Despite the din and hustle this skyscraper remains a regal lady, surrounded by the tempest tossed humanity that is New York.

The New York Central Building rises 565 feet. Construction began in the spring of 1928, and by completion its cost was calculated at eight million dollars. It is linked to an underground concourse, a pedestrian network that connects twenty-one buildings. The New York Central is at the core of this "city-within-a-city."

The skyscraper is a visual landmark for miles up Park Avenue, and until 1962, south on Park Avenue too; the emergence of the Pan Am Building (Emery Roth & Sons, Pietro Belluschi, and Walter Gropius) effectively and forever eliminated this vista. Nonetheless,

inhabitants of nearby skyscrapers are treated to New York Central's spectacular night lighting. Its nostalgic presence, a counterpoint to the modern giants nearby, is reflected in miles of their shimmering glass skins.

New York Central's exterior walls are laid up with Texas Mountain Pink Granite and Indiana limestone up to the fourth floor; beyond are walls of buff brick. Over the Forty-sixth Street entrance is a monumental statuary group with a large clock. High above various setbacks is a central tower crowned by a steeply pitched copper roof with gilded ornaments and lantern.

Public areas inside the New York Central are sumptuous by any standards. Direct passageways between Grand Central Terminal's Upper Level Concourse and the main elevator corridors of the skyscraper are as adventurous as they are beguiling. The elevator lobbies, there are forty elevators in the building, have walls of red Jasper Oriental marble and travertine. Bronze elevator doors are etched with images of cornucopia, wheat stacks, oak leaves, and lightning bolts dancing around a multicolored sunburst. Perhaps the most meaningful expressions are those of the railroad's laborers, those who carved the land, laid the rails, and drove the spikes. For these, the men who toiled for the mighty railroad are etched steel-bladed hand picks, *their* symbols of accomplishment. Further enriching this space are five, globe-shaped and gilded chandeliers. Tenant floor lobbies are wainscoted with Italian Botticino and Istrian marbles. Floors are finished with terrazzo. An under floor duct system for utility wiring was included, and in 1928 was viewed as a positive marketing device.

One man responsible for the design of this landmark skyscraper was Whitney Warren (1864-1943), a prominent and respected architect. He was born and educated in New York City, and at the age of eighteen sailed for France eventually gravitating to the Ecole des Beaux-Arts in Paris. In 1896 he returned to New York City and formed a partnership with Charles Wetmore. The firm's first significant large project was that for Grand Central Terminal. The firm's other partner was architect Charles D. Wetmore (1867-1941), a native of Elmira, New York, and 1889 graduate of Harvard University.

Foshay Tower

Minneapolis

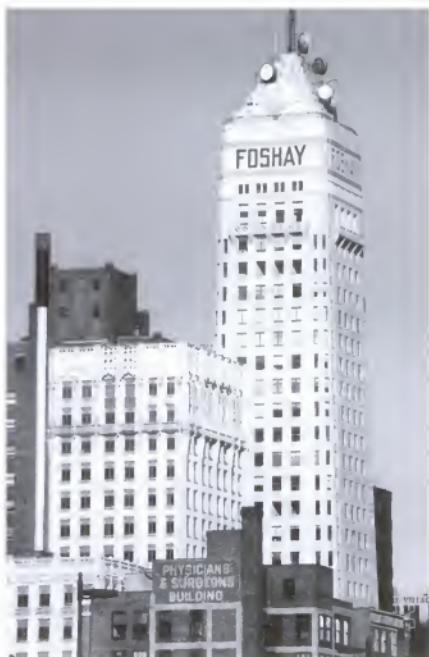
Magney and Tusler, Minneapolis

1929

The Foshay Tower is certainly one of America's most idiosyncratic skyscrapers. This Art Deco landmark, with its battered walls and stepped-pyramid top, is unmistakable on the skyline and is still a favorite with the public. Wilbur Burton Foshay (1881-1957) was a successful businessman involved in the electrical utilities industry. The W.B. Foshay Company was incorporated in 1917 with headquarters in Minneapolis and branch offices throughout the country. In 1927, Foshay announced that he would construct Minnesota's tallest skyscraper and that it would be modeled after the Washington Monument, a 555-foot-tall structure that he admired as a boy. Architect Gottlieb R. Magney and Wilbur Foshay were the form givers to the project, the design of which was granted a patent from the United States Patent Office.

After over two years of construction the Foshay Tower was prepared for public viewing. Formal opening ceremonies began on August 30th, 1929 and they lasted for three days. People were treated to tours of the city's tallest building, a thirty-two-story, 447-foot pil-

lar.³³¹ The Foshay "complex" occupies a quarter-block and is composed of an outer ring of retail establishments surrounding the office tower. The dimensions of the tower are eighty-one by eighty-seven feet at the base tapering to fifty-nine by sixty-five feet at the top. Total cost of the building was \$3,375,000.

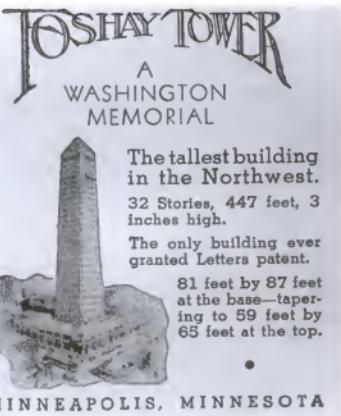


(231) Foshay Tower. Photo by author.

(232) This ticket allowed you to ascend to the outdoor promenade of the Foshay Tower.

The Foshay's exterior is finished with creamy-hued Indiana limestone and includes 750 casement windows. Giant letters "FOSHAY" face all four directions some 400 feet above the street. These measure ten feet tall by forty-four feet across. They are lit by some 900 60-watt bulbs and are visible twenty-five miles in the night sky. Furthermore, *The New York Times* reported "The Tallest Building in the Northwest" would have a powerful aerial beacon.³³² The W. B. Foshay Company was authorized to install a landmark lamp atop their recently completed skyscraper. This aviator beacon would revolve twice per minute and include a twenty-four inch parabolic mirror.

The Foshay Tower's observation deck is located on the thirty-first floor. It features an exterior "sidewalk" from which one can circumvent the tower for thrilling views of Minneapolis and areas over thirty miles away. To the dismay of some, a 160-foot communications mast was anchored atop the Foshay Tower in the 1960's; in the 1970's, communication dishes sprouted above, but only to the tower's detriment. Art Deco designs abound throughout the building's public areas. Ceiling frescoes, featuring skies with ro-



bust clouds, hover over geometric glass chandeliers and Italian sienna marble floors. The elevator lobby is especially romantic and is where all four of the Tower's cabs rest.

The business home in the Chanin Building is freed from the exactitudes of street and number, difficult to remember and subject to change. "Chanin Building" is an address already known around the world – proof against all change forever.³³³

Chanin Building

New York City

Sloan & Robertson, New York City

1929

"The Chanin Building emphasizes the fact that we are living in the Age of Skyscrapers," proclaimed a contemporary real estate catalog. And indeed the Chanin Building was viewed as *the* office tower of Midtown Manhattan. At completion, the Chanin was New York's third tallest skyscraper, and America's fifth.

The Chanin Construction Company was founded in New York City in 1919 by brothers Irwin (1891-1973) and Henry (1894-1973) Chanin; brothers Sam and Aaron Chanin joined the firm later. Chanin Construction was responsible for erecting dozens of Manhattan skyscrapers throughout the 1920's and early 1930's. The firm desired a prestigious and *tall* headquarters for their construction and real estate empire. Sloan & Robertson were summoned to produce drawings, and before long, a construction schedule was produced that would ultimately occupy the next two years.

A site on the corner of 42nd Street and Lexington Avenue, diagonally across from the future location of the Chrysler Building, was chosen. It was determined that the Chanin would rise from an irregular plot of 197 feet by 175 feet to a height of 56 floors, 680 feet tall. Exterior materials would include buff brick, terra cotta, and limestone. Its steel skeleton came to weigh 13,500 tons and its erection took only 114 working days. The Chanin Building declared finished in January, 1929.

The new tower was the flagship property of the Chanin organization. It was streamlined, up-to-date, a thoroughly modern structure. Its design featured a series of setbacks that came to "launch" a great tower that rose from the thirtieth to the fifty-second floor. The Chanin's summit still retains the gigantic brick buttresses that made it easily identifiable from great distances. Originally, the Chanin Building's management touted the fact that their tower was the business home to more than 10,000 people, and that 100,000 people visited daily. The Chanin Building boasted 10,000 telephones, 3,000 radiators, 10,500 light fixtures, and that it consumed 250,000 gallons of water each day. Twenty-one, Otis electric elevators were installed and were serviced by a chief dispatcher, six assistants, and some sixty-five operators and maintenance men.

The Chanin Building's tenants included leaders in the airplane, radio, petroleum, chemical, electrical, lumber, machinery, paper and railway equipment industries. Others who originally had "homes" in the building included accountants, advertising agencies, architects, engineers, and attorneys. The Chanin Construction Company occupied the executive offices on the fiftieth and fifty-first floors. On the fiftieth floor were an auditorium and well-appointed conference rooms for the "meetings of stockholders and directors of great corporations." Six high-speed elevators serve these floors.



(233) Chanin Building

Still one of New York's most delightful Art Deco buildings, it is usually the Chanin's main lobby that is best remembered. The lobby's design was conceived by noted interior designer Jacques Delamarre in collaboration with architectural sculptor Rene Chambellan. Together they wove a space that is nothing less than an ample visual feast. Light fixtures, elevator grills, walls and ceilings are replete with Art Deco images. Stylized panels, depicting 1920's Manhattan, feature skyscrapers and sunbursts, airplanes, dirigibles, ships, trains, and muscular bridges. Streamlined light pendants of metal and glass drip over lobby and corridors. Low relief bronze grills adorn all adjacent elevator lobbies and entrance doors. At night too, the Chanin Building was particularly outstanding. Lamps equal to thirty-million candlepower brilliantly floodlighted the top 6 floors. Its summit was visible from a radius of 35 miles. Regarding the Chanin's public observation floor, and the skyscraper's prominent position on New York's skyline, the following information, albeit somewhat romanticized, is offered:

Inspiration Point is located in the Chanin Building. From its observation promenade, situated at the level of the fifty-fourth floor and extending entirely around the building, as well as from the upper office floors, there is an unobstructed view over all New York and its environs which sends the creative worker back to his desk exhilarated and inspired. The Chanin Building is a national landmark, from the earth, from sea and from the air. To its observation tower come New Yorkers and visitors from all the world for a comprehensive survey of the greatest of cities. It is clearly visible to all river-borne traffic and is pointed out to the increasing hundreds who see New York from airplanes.³³⁴

*On Monday evening, November 4, 1929, this magnificent new temple of music was dedicated. Verdi's "Aida" had been chosen for the opening opera. For the first time in the history of the art, a great opera company now is housed in its own income-producing building.*³³⁵

Civic Opera Building

Chicago

Graham, Anderson, Probst & White, Chicago
1929

The Chicago Civic Opera Company was founded in 1921. Businessman Samuel Insull (1859-1938), an opera aficionado and visionary, was its president. With Insull's guidance, and the spirited assistance of others, a regal opera house was gifted to the Chicago Civic Opera and to the people of Chicago. Only eight years after the company's founding, this cultural institution would occupy a magnificent space in the bowels of a great skyscraper. This development on Wacker Drive was unique and it combined an opera house with a skyscraper; the Civic Opera Company erected the office tower above as a rental component for generating income.³³⁶ Years earlier, a site was chosen on the east bank of the Chicago River at West Madison Street. It was a full city block that offered much to developers – not necessarily to opera patrons. The location was close to two major train stations, the elevated lines, major hotels, the financial district, and to government offices. Private autos, cabs, and busses provided easy access. Large floor plates were promised and so were unimpeded views of downtown and the Chicago River. It was felt these amenities satisfied office tenants, but opera goers sought different amenities. A prominent location was a requisite and the favored site provided that. Still, acoustics, sight lines, patron boxes, stage sets, storage, costumes, and a host of other needs had to be negotiated. And there were still those who wished the Civic Opera Company would remain in its quarters inside the glorious Auditorium Building.³³⁷ But their wishes would amount to naught.

The respected firm of Graham, Anderson, Probst & White, was selected to prepare plans for what was indeed a very complex structure valued at more than \$20 million. Simply put, there were four major components to this project: a large auditorium, two flanking office towers, and one massive office slab that, when completed, would rise higher than all but three buildings in Chicago. Like some colossal puzzle, these pieces had to seamlessly fit and flawlessly serve their makers.

The riverfront site was cleared of nondescript warehouse and commercial buildings, with one exception – the Central Union Block - as foundation work commenced.³³⁸ Twenty-two-story steel skeletons rose, like giant bookends, flanking the auditorium space and

the centerpiece skyscraper. At 270 feet above the sidewalk these were pronounced finished. The auditorium component, a vast central "setback," stood fourteen stories high and seemed to cower beneath the surrounding office titans. Work progressed on the tall slab piece until it too was completed. The Civic Opera Building, jacketed with Indiana limestone, was finished in fall of 1929 and officially topped out at forty-five stories, 555 feet tall.³³⁹

The building is immense. It contains 1.4 million gross square feet, 842,000 rentable. Its occupants gaze out through some 5,600 windows and they ride twenty-two passenger elevators; custodians ride another three. The skyscraper's celebrated auditorium, the home of the Lyric Opera (formerly Civic Opera), seats 3,563. Architecturally, many design sources were employed for the Civic Opera with samplings of Roman Classical, Art Deco, and a generous smattering of French Baroque. A formal colonnade of twenty stone columns marks the Wacker Drive front and features giant lunettes that recall those of the Paris Opera House. Adjacent to this grand and very urban colonnade are carved-stone escutcheons, floral motifs, ceremonial portals and decorative pediments. A broad, copper-covered hip roof tops the forty-fifth floor.

Throughout the years the Civic Opera Building has been the favorite of insurance companies and large banking concerns since floor plates measure from 10,000 to 35,000 square feet, ample enough to support a substantial office staff at one location. The shear mechanics of housing such diverse clients as a large metropolitan opera company, hundreds of office tenants, and dozens of commercial businesses must have been considerable for Graham, Anderson, Probst & White. Certainly difficulties and conflicts arose, still, the architects pulled off the project with aplomb.

Williamsburgh Savings Bank Building

New York City

Halsey, McCormick & Helmer, New York City

1929

Since its completion, and for sixty years, the landmark Williamsburgh Savings Bank ranked tallest building in all boroughs outside Manhattan. It stands forty-two floors, 512 feet above the corner of Hanson and Ashland Places in downtown Brooklyn, and in 1989 was bettered by the Citicorp Building in Queens.³⁴⁰ Nonetheless, to Brooklynites the Williamsburgh evokes nostalgia and unbridled pride for *their* skyscraper.

The Williamsburgh Savings Bank was chartered in 1851 and in October, 1927 construction commenced on this institution's skyscraper headquarters. The tower's plans were formidable, its size daunting, factors that refused to deter the project – the largest in Brooklyn's history. On May 1, 1929, the bank's building opened to the public. Its architecture recalled the Romanesque and Byzantine, and the public was awed. A broad, stone-faced banking hall supported a ten-story office block that, in turn, lifted "setback elements" that melded into a great skyward tower topped with a gilded dome. This lanky tower continued America's penchant for sky-high clocks and featured a four-faced time-piece with faces measuring twenty-seven feet across; It was the country's largest. This skyscraper remains much as it did at completion. Banking customers are treated to exterior walls embellished with symbolic carvings referring to thrift and other virtues. The banking hall, still intact, is fabulous. Its cavernous size, rising sixty-three feet by almost a block wide, features polychrome mosaics, stunning marble-covered walls and floors, and three windows measuring forty feet tall. At the twenty-sixth floor there once was a public

outdoor viewing terrace – an aerie from which all boroughs may be surveyed, but alas, it no longer is accessible.

Carbide and Carbon Building

Chicago

Burnham Brothers, Chicago

1929

Few Chicago skyscrapers have charmed the citizens of this Midwest metropolis as the easily recognizable thirty-seven-story Carbide and Carbon Building. Until the arrival of Mies van der Rohe's black steel and glass towers of the 1960's, the Carbide and Carbon was the darkest skyscraper in town.³⁴¹ Its walls were laid up with black granite and black marble, dark green brick and equally dark terra-cotta. Its top, more whimsical, was accented with gold leaf. It was truly unique and everyone knew it.

Chicago during the 1920's epitomized the racy, the lawless, and the speakeasy. The Carbide and Carbon Building was conceived and born during the Jazz Age, during Prohibition, when touring cars took corners on two wheels. Billy Sunday could not shut down the town of payola, of bathtub gin, and of Al Capone. And somehow in this setting the neo-Classical style, the vanguard of their father Daniel H. Burnham, was simply inappropriate. With this commission the Burnham Brothers responded to *their place in time* and *their place on the globe*.³⁴² They employed the 1920's Art Deco style with verve. They mastered the moment allowing the *architecture* to rejoice and to reflect both time and place.

The Union Carbide and Carbon Corporation - later Union Carbide - founded and headquartered in New York since 1917, decided to construct a regional headquarters in Chicago. This manufacturer of electronic components, plastics, metals and batteries chose a location on busy North Michigan Avenue. After two years of construction and the expenditure of \$3.5 million, the skyscraper was completed. Its lobby was superb, an Art Deco tour-de-force. Its main rectangular office block rose twenty-three floors, 268 feet. Thrusting above, at the building's front or sidewalk edge, was the other component - a tower of fourteen floors reaching up another 235 feet.³⁴³

The Carbide and Carbon Building has a brooding aura, dark and powerful. Hints of Art Deco design encircle the building, but up high they come out of their hiding. The walls of floors thirty-five through thirty-seven are celebratory; they express Art Deco geometrics, the zigzags, the concentric circles and cascading forms. The top of the Carbide and Carbon is nothing less than a treat for the eyes – a reward for searching out beauty. Nightly, but no longer, its decorated fifty-foot-tall chimney was lighted identifying the building for miles. Facing Michigan Avenue, above the skyscraper's main entrance, is the building's original name in polished gold letters, an Art Deco message in perpetuity.

Medical Dental Building

San Francisco

Miller & Pflueger, San Francisco

1929

A svelte curtain wall, unbroken piers, and rounded corners mark this office tower as one of the great Art Deco buildings of California. Its exterior detailing and interior embellishments are of Mayan or Aztec sources. Streamline forms abound and the overall effect is

quite dazzling. The Medical Dental Building, more recently known as 450 Sutter Building, originally catered to the health professions, hence its name. This skyscraper rises twenty-six floors, 342 feet tall.

Bullock's Wilshire Store

Los Angeles

John and Donald Parkinson, Los Angeles

1929

The Bullock's Wilshire Store is an Art Deco masterpiece. It has walls of light tan colored terra-cotta which are trimmed with copper, the metal now sporting a delicious green patina. Its tower, employing skyscraper imagery and powerful asymmetric massing, make this a delight for the eyes.

Bullock's ten-story, largely ceremonial tower breaks free from the cascading mass of the main building and stretches upward to announce its location to those for miles around; when completed Bullocks Wilshire Store stood in a largely residential neighborhood. Besides being an advertising tour-de-force, the setback tower also marked the primary *street entrance* to the store. Bullocks' one-third block footprint was shared with its own parking lot, a feature that was destined to define the auto-dependant retail formula of the future. A second "main entrance" was located here to serve those who arrived by auto.

Once inside, shoppers were greeted by a central hall which gave access to the various "specialty departments," each designed to simplify the shopping experience while alleviating customers of their money. For weary shoppers Bullock's also housed a tea room, candy counters, and lounges. Exotic woods such as sycamore, walnut, satin wood, maple, oak and cork were employed throughout and interwoven with copper, glass, gold and silver. Other metals, marbles, and plaster were also, and generously, worked into the interiors. Relief carvings had their place too. In its totality, with its telescoping tower, streamlined forms, and rich materials Bullock's was one of America's great Art Deco retail venues.



234) Bullock's Wilshire Store



(235) Steuben Club Building. Photo by author.

Steuben Club Building

Chicago

Vitzthum & Burns, Chicago

1929

Chicago's Steuben Club Building is an all-too-often overlooked skyscraper that deserves better. Its forty-five stories were devoted to offices and to a private (and assumed rather exclusive) organization called the Steuben Club which was installed near the very top of the tower. Chicago boasted other skyscrapers named after private club tenants: the twenty-two story Masonic Temple (Burnham & Root, 1892) was the most prominent to date and the forty-two story Medinah Athletic Club (Walter W. Ahlschlager, 1929) would soon be finished. The Steuben Club differed from the rest; its "club house" was hidden atop a 465-foot tall, cathedral-like structure drawn on twelfth century imagery.

Impressive massing and pleasing proportions help describe the Steuben Club Building. A twenty-eight story rectangular base supports an eight-sided tower of seventeen floors. The tower telescopes six times and culminates with a twelve-sided "drum" with decorated walls flanked by flying buttresses.³⁴⁴ The exterior of this neo-Gothic skyscraper is rich with blind arcades, statuary niches, ogee arches, cartouches, finials, flying buttresses, and other Gothic detailing. While not Chicago's answer to New York's fifty-five story Woolworth Building (Cass Gilbert, 1913), the Steuben Club does share some similarities: the neo-Gothic style and the white walls that rise sheer to the twenty-eighth floor where each building's mass breaks into an offset tower.

The Steuben Club Building is jacketed in tons of white terra-cotta supplied by Chicago's Northwestern Terra Cotta Company. In combination with walls of cream-colored limestone the Steuben Club gleamed when new, visible throughout most of Chicago's Loop. Because of the building's corner condition its walls rise directly from the sidewalk's edge – no plazas here. The Steuben Club Building occupies a very urban site just feet from Chicago's elevated trains and near to the heart of the La Salle Street financial canyon. Its elegant profile, pronounced verticality, and urban attitude help rank this high on the list of celebrated 1920's skyscrapers.

Chapter Six

The Gift of Art Deco

1930-1940

The Skyscraper Matures

During any year of the 1930's Americans knew more about Laurel & Hardy and W.C. Fields than they did about Raymond Hood or William Van Alen. Comedy was welcomed and architecture was, more or less, viewed as arcane; architectural star status would be a phenomenon of the future. By 1933, millions had lost their jobs, and many of those were architects. It was the time of Hoovervilles, and hoodlums, Apple-Annies, and bread lines. Despair was rampant. Still, despite the hardships, landmark skyscrapers were erected with many cities and towns witnessing record breakers downtown. The lofty Chrysler and Empire State lead the charge with Rockefeller Center being the largest office complex anywhere. Chicago's Merchandise Mart boasted the most space, Manhattan's Waldorf-Astoria claimed honors as the world's largest and tallest hotel and Cleveland's Terminal Tower was deemed tallest building outside New York. In 1930, Philadelphia's seminal Jayne Building marked its eightieth year.

In 1925 Paris hosted a public exhibition to herald in a new and modern design aesthetic, its official name was the *Exposition Internationale des Arts Décoratifs et Industriels Modernes*, in short – Art Deco. Its design sensibilities were far reaching influencing the styles of everything from jewelry, motorcars, ocean liners, trains, clothing, furnishings, furniture, and flatware. Architecture, too, was profoundly influenced and included almost every building type including bridges, movies theaters, storefronts, train stations, and of course the skyscraper. Speed, the obsession of the 1930's, was particularly germane to the skyscraper wherein the tall building speed was translated into form. Lines were crisp and ornament echoed simple geometries.

In this context, the years of the Great Depression, radio was king with many stations broadcasting from the tops of skyscrapers across the country. Exterior lighting added drama to building tops while the voices of Walter Winchell and Dick Tracy raced to living rooms everywhere. There were improvements in elevator technology, especially in

response time and overall speed, and the tandem passenger car was developed. Public observation floors, with telescopes, restaurants and night clubs found their way to skyscraper tops – the *roof* was rediscovered.

Within twenty-four months of 1929 – the "Crash" year - large and medium cities alike became the homes to skyscrapers of distinction. The watershed year of 1931, indeed the early thirties, produced dozens of Art Deco skyscrapers outside of New York and Chicago. Places like Enid, Oklahoma, Fort Wayne, Indiana, and Battle Creek, Michigan, claimed outstanding examples of Art Deco-style skyscrapers. These are but a few:

- Central Depositor's Bank, Akron (Walker & Weeks), 1931, 28 floors, 330 feet
- Old-Merchants National Bank, Battle Creek (Weary & Alford), 1931, 19 floors, 214 feet
- Broadway Tower, Enid, Oklahoma (Layton, Hicks & Forsyth), 1928, 15 floors, 176 feet
- First National Bank, Oklahoma City (Weary & Alford), 1931, 33 floors, 447 feet
- Lincoln Tower, Fort Wayne (Walker & Weeks), 1930, 23 floors, 312 feet
- Mariner Tower, Milwaukee (Weary & Alford), 1930, 21 floors, 250 feet
- Fidelity Bank & Trust, Kansas City (Hoit, Price & Barnes), 1931, 33 floors, 434 feet
- Kansas Power and Light, Kansas City (Hoit, Price & Barnes), 1931, 36 floors, 503 feet
- Bryant, Kansas City, Graham (Anderson, Probst & White), 1931, 26 floors, 319 feet
- Central National Bank, Richmond (John Eberson), 1930, 24 floors, 333 feet
- Nix Professional, San Antonio (Henry T. Phelps), 1930, 23 floors, 375 feet
- Sterick, Memphis (Wyatt C. Hedrick), 1930, 29 floors, 365 feet
- Milwaukee Gas Light (Eschweiler & Eschweiler), 1930, 20 floors, 250 feet

To be sure many, if not all, these early-1930s skyscrapers were planned before that fateful October day in 1929. The stock market crash and the ensuing depression wreaked havoc with many new buildings and their tenants. Throughout the country empty floors went begging for tenants and bankruptcy haunted investors, contractors, and architects alike. It would be years before the economy would become robust again. Ironically, especially for the skyscraper, the 1930's proved to be a decade of astonishing achievement. The world would count only two buildings over 1,000 feet tall, and both poked the sky over New York.

One of those towers, the Empire State Building, hosted a celebrity visit in January, 1932. Josephine Baker, Jimmy Walker, and Groucho Marx were noted personalities but it was sightless Helen Keller whose visit lent an air of surrealism to the viewing promenades that no others could. On January 17th, 1932, Keller recorded the following "impressions" in the *New York Times*:

It was a thrilling experience to be whizzed in a "lift" a quarter of a mile heavenward, and to see New York spread out like a marvelous tapestry beneath us. There was the Hudson! - more like the flash of a sword-blade than a noble river. The little island of Manhattan, set like a jewel in its nest of rainbow waters, stared up into my face, and the solar system circled about my head! ...I see in the Empire State Building something else-passionate skill, arduous and fearless idealism. The tallest building is a victory of imagination. Instead of crouching close to

the earth like a beast, the spirit of man soars to higher regions, and from this new point of vantage he looks upon the impossible with fortified courage and dreams yet more magnificent enterprises.

*His job as a core maker for the Josiah Anstice Co. led Interlicchia to play a part in making the wings more than half a century ago, he recalls. The wings were designed by the building's architect, Ralph Walker, who was said to be inspired by seashells on a Florida beach.*³⁴⁵

*The new building will be the tallest in Rochester, rising 258 feet above the sidewalk and constituting a landmark of such unusual beauty that it is certain to attract country-wide attention as an example of modern monumental architecture in which the last word in technical efficiency and stability has been linked with a feeling for modern line and a certain quality of idealism.*³⁴⁶

Genesee Valley Trust Building

Rochester

Voorhees, Gmelin and Walker, New York City

Carl C. Ade, Rochester

1930

The Genesee Valley Trust Company of Rochester, New York, constructed this skyscraper as its corporate headquarters. Upon completion it was crowned the city's tallest and most startling structure. The Genesee Valley Trust Building was an instant civic landmark, despite which, few outside of Rochester seem to be familiar with; its anonymity is not deserved. This skyscraper is a contemporary of the equally expressive Chrysler Building, each being an Art Deco tower with an extraordinary "hat." For over seventy years the Genesee Valley Trust Building has marked Rochester's skyline with theatricality and whimsy, and in the 1980's was recognized a city landmark and included in the state and national registers of historic places. This is a skyscraper America deserves to know.

The Genesee Valley Trust Company was founded in Rochester in 1901, and throughout its early years it occupied banking structures that were considered typical by most standards. In April, 1928, bank officers decided that a new headquarters building would better serve the bank, its image, and its customers, and with that a building committee was appointed to put that decision into action. A downtown parcel on the northwest corner of Exchange and Broad streets was acquired. Preparations were made for a new home office and the Manhattan-based architecture firm of Voorhees, Gmelin and Walker was hired to draw the plans. Carl C. Ade, of Rochester, was included as consulting architect. Local media introduced the New Yorkers' work to Rochesterians:

Voorhees, Gmelin and Walker are looked upon as leaders in the modernist movement in architecture. The headquarters buildings of the New York Telephone Company and of the Western Union Telegraph Company and the Irving Trust Company in New York City are among recent large structures for which they have been the architects.³⁴⁷

On May 10, 1929 dignitaries and bank officials were gathered for the tower's ground-breaking ceremonies. On October 29, 1929 (the day of the infamous New York Stock

Exchange / Wall Street crash) the building's cornerstone was laid. Construction quickly progressed with the skyscraper's completion only eleven months later. The skyscraper's base measured sixty-two by 160 feet, and it stood thirteen floors, 258 feet tall.



Genesee Valley Trust
Company Rochester, New
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The Architectural Record, April, 1931.

149

(236) Advertisement: The Specification of Distinction Genesee Valley Trust Building, Rochester
The Architectural Record, April, 1931, page 149.

The Genesee Valley Trust Company Building officially opened on September 29, 1930. The skyscraper represented the bank's investment of \$1.5 million and was the pride of the bank and of Rochester. Genesee Valley Trust Company would occupy only a portion of the building's 110,000 square feet of floor space, the basement, first, mezzanine, and second floors; the remainder was rented to tenants. Mezzanine and tower floors were served by five passenger elevators and two gracious staircases. A pneumatic tube communication system was installed throughout the banking quarters and a complete "automatic telephone system" served the entire building. After the opening ceremonies the public eagerly viewed the main banking room, a showplace measuring fifty-five by 100 feet and rising thirty-three feet. Counters were of polished black walnut with ebony inlay; counter screens were of bronze and glass. The walls were dressed with colorful murals, some as large as twenty-eight by thirty feet. Other walls were of red Levanto and Easton green marble from Lombardy, Italy, and red Altico marble from Valencia, Spain. Floors

were of terrazzo and the ceilings above were brightly painted with scenes depicting the development of Rochester. Exotic woods, fabrics, and an abundance of polished brass enhanced the public spaces.

The skyscraper's exterior was wrapped with Indiana limestone which was accented with Deer Island (Maine) granite, and bronze. Art Deco-styled stone carvings and bronze panels depicting "Security" and "Trust" were prominently displayed as bank virtues and were easily visible to all depositors. The most celebrated artwork was a bronze bas relief positioned above the bank's main entrance and titled *The Dawn of a New Era*. It was executed by sculptor Leo Friedlander of New York City. It depicts "civilization taking possession of the Genesee Valley following the treaty made between representatives of the white men with the Six Nations of Indians."

Walter Raymond Agard, art critic, wrote in a chapter entitled *The Skyscraper*:

More powerful and original is Leo Friedlander's frieze, *The Dawn of a New Era*, over the doorway of the Genesee Valley Trust Company Building in Rochester, N.Y. It does not project far from the wall, but is full of picturesque and varied movement.³⁴⁸

"Picturesque and varied movement" perhaps best describes the *largest sculptural forms* on this building, and in fact, probably in all Rochester. As a grand gesture, in a preposterous and utterly delightful tour-de-force, architect Ralph T. Walker left Rochester with a powerful civic icon. In lieu of another flat-topped corporate headquarters Walker decided in favor of a structural tower, a stone and perforated metal mass to act as a base for a sculpture entitled the *Wings of Progress*. Four polished aluminum wings, each forty-two feet high, were positioned atop the fifty-five foot tall podium tower. Gleaming in the sun these wings exploit figural space as no other skyscraper; space weaves in and through the openings provided by the wings emphasizing the contrasting of solids and voids. Here architectural sculpture and symbolism itself is elevated to heroic proportions. Each evening the entire ninety-seven foot summit is brilliantly illuminated and the spatial ballet is repeated with equally dramatic effect. The top of the Genesee Valley Trust Building propelled that structure into the realm of the celebrated Art Deco towers of Manhattan. Its immediacy and potency rivals the Chrysler's cone, the "mooring mast" top of the Empire State Building, and the salt shaker tops plopped atop the Waldorf-Astoria Hotel.

Perhaps Ada Louise Huxtable says it best when she wrote of Art Deco architecture:

There is immense visual pleasure in its fantasy world of ziggurats, sunbursts, zigzags, waves, stepped triangles, stylized machines, abstract suggestions of energy and speed, and the exotic natural wonders of waterfalls, tortoises, condors, and doves. One marvels at the superb craftsmanship in the marble, bronze, glass, bakelite, monel metal, plastics, and rare woods.³⁴⁹

The "modernist" architects who designed the Genesee Valley Trust Building were well seasoned before they received the Rochester commission. Stephen Francis Voorhees (died 1965) attended Princeton University, studied architecture there, and graduated in 1900. He was chairman of the Construction Code Authority under President Roosevelt's National Recovery Administration, served as president of the American Institute of Architects, and design chairman of the New York World's Fair. Paul Gmelin (1859-1937) was born in Ulm, Germany and graduated from the University of Stuttgart. After immigrating

to America, Gmelin was employed in various firms: Babb, Cook & Willard; Cyrus Eidritz; and Eidritz & MacKenzie. Beginning in 1910, Gmelin joined Andrew MacKenzie and Stephen Voorhees in partnership that lasted until 1926. Ralph Walker (1889-1971) studied architecture at the Massachusetts Institute of Technology and in 1916 was hired in the firm of MacKenzie, Voorhees, and Gmelin. After MacKenzie's death in 1926, Ralph Walker was promoted to partnership status. In 1957 the American Institute of Architects voted Ralph Walker "architect of the century." Voorhees, Gmelin & Walker designed *hundreds of buildings* just for east coast telephone companies. They had erected multiple office buildings and banks and were for decades the firm of choice for large corporate projects.

One North LaSalle Street

Chicago

Vitzhum & Burns, Chicago

1930

A most urban and urbane building, One North LaSalle Street stands squarely in Chicago's financial district helping to visually define that famous business corridor. The walls of this landmark skyscraper crisply confront the sidewalks that border it employing no plaza, no setback, and no space consuming gimmicks in the forms of sculpture, foliage, or sweeping staircases. This is a no-nonsense building designed to create profit for its owners, provide its tenants with functional space, and impress the public-at-large with quality architecture. It accomplishes all three.

One North LaSalle Street is site specific; it could not capture the imagination in quite the same manner at any other location. The towers that surround it all behave in the same manner walling LaSalle Street and adjacent streets without respite. The result is a collection of streets and sidewalks girded with stone and glass walls, an urban symphony - not of sound, but of cohesion and well-mannered *vertical surfaces and horizontal spaces*.

Overall, One North LaSalle effortlessly rises to meet the sky while employing telescoping segments, one piled upon the other. The first setback occurs at the twenty-fourth floor (265 feet high) and acknowledges the rooftops of some neighboring buildings. Windows are separated by limestone piers rising without difficulty, straight and true. All proportions are admirable and the skyscraper as a whole is clean-lined, fit and trim if not somewhat austere. Softening the skyscraper's main façade are seventeen panels in low relief depicting the building's namesake. Seventeenth century French explorer Robert Cavelier de la Salle was purported to have camped on this very site.

One North LaSalle Street stands on the northwest corner of LaSalle and Madison and was the product of architects Karl M. Vitzhum and John J. Burns. It rises forty-nine stories, 529 feet above the sidewalk, and at completion it ranked the fifth tallest building in Chicago. This was the largest project undertaken, to that date, by the firm of Vitzhum & Burns.³⁵⁰ Its \$7-million cost was truly sobering for the year 1930, its completion occurred just months after the Stock Market Crash of 1929.

The public lobby just inside the La Salle Street entrance is an Art Deco jewel box. Dark marble walls and ceilings are covered with angular patterns, chevrons, female nudes, and foliate patterns. Polished brass elevator doors, featuring low relief semi-nude females in the forms of Greek goddesses, silently glide from closed to open and back again as in some primal Art Deco dance. Shiny metal and frosted glass wall sconces

emerge bird-like from the wall planes, their "wings" fully open to dispense their diffused light. This is not just any lobby, this space is a superbly orchestrated and totally engaging experience.

*But the thing to remember is that the News building was less designed than built. Hood thought architecturally and he could not draw a pretty picture. The News building was built from models, its shape was arrived at before a pencil was put to paper.*³⁵¹

Daily News Building

New York City

Howells, Hood & Fouilhoux, New York City

1930

Raymond Mathewson Hood was the architect most credited with the design for the headquarters of the great metropolitan newspaper, The New York Daily News. By all accounts, whether designed in the form of hundreds of models, thousands of sketches, or osmosis, the Daily News Building was a winner.

Striking, crisp, and thoroughly modern people said. Accolades were bountiful, and they were lavished upon the architects' sketches, models, and finished drawings. At completion the Daily News Building was the equal of any in the ranks of the modernist vanguard in Europe, and in America it served as harbinger to a genre of skyscrapers yet to come. Its design was both influential and controversial. Gone were rooftops with domes and temples, walls of neo-gothic carvings, and lobbies dripping with mosaic tiles, of Roman arches and miles of egg-and-dart enrichment. Some declared a new age in skyscraper design had emerged, and they were right. This radical-appearing skyscraper was constructed by the Daily News as its headquarters. This metropolitan newspaper was first published as the *Illustrated Daily News* on June 26th, 1919, and within five years its circulation reached three-quarter million, then one million, making it the most widely read newspaper in the country. The newspaper's popularity spurred company executives to call for more modern and spacious offices and for printing facilities second to none in efficiency and capacity. A mid-block site on East Forty-Second Street was chosen, architects were selected, and on December 29th, 1928 construction commenced on what some called the most daringly modern feat in New York.

Long before completion sidewalk gawkers discovered just what kind of skyscraper this was going to be. It was *vertical*, not subtly vertical, but *boldly* vertical. Here was a skyscraper that should, as Louis H. Sullivan said, "... be every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a single dissenting line..."³⁵² And so it was. Piers of glazed white brick rose unbroken from base to setback. Racing upward these not only divided window bays, they channeled skyward spandrels of red and black brick, and in so doing, helped to produce energy-charged facades.

After only eighteen months the Daily News Building was pronounced completed on June 25th, 1930. The thirty-six-story building rose 476 feet. Its weight was calculated at 74,037 tons and it contained 718,006 gross square feet of floor space. Here stood an edifice of democracy, for only in a democracy is the truth unbridled, the newspaper unfettered, and architecture free to be what it wishes. The Daily News Building was symbolic and erected for the common man as well as for the uncommon man; it was a newspaper and a skyscraper for every man.

Perhaps the most memorable and meaningful entrance on any *modern* skyscraper rests here. Above the doors is a large, low relief, limestone frieze. The uppermost register simply proclaims "The News" in an Art Deco font. The Daily News Building is depicted in a central panel – cloud shrouded and majestic. The bottom register could not be more "American" and features a motley group of artisans, office workers, businessmen and tycoons – a democratic sampling of the News' readership. Arching overhead are the words "He Made So Many of Them", an abbreviated reference to Abraham Lincoln's quip, "God must have loved the common man, he made so many of them." Indeed, this was a newspaper of, for, and by the people.

The Daily News Building's lobby is pure theater. It is dark, dramatic and rises the equivalent of four stories. In what can *still* be considered America's most futuristic room there slowly rotates a twelve-foot diameter, two-ton globe of the world. Overhead, black faceted glass plates rise dome-like to a polished brass disk. A single beam of light, emanating from the disk's center, is focused upon the globe's surface – voila, daylight. Seventeen panels containing weather and meteorological instruments and charts encircle the walls. On the floor is an oversized compass pointing to fifty-eight principal cities and their relative distances from New York. Here is a powerful, yet thoroughly delightful space, the likes of which may never be topped – its bravado not bettered. In 1957, the Daily News Building was cited by the Municipal Art Society and the Society of Architectural Historians "For originality in design and influence on later work."

Grant Building

Pittsburgh

Henry Hornbostel, Pittsburgh & New York City

Eric Fisher Wood, Pittsburgh & New York City

1930

Upon completion, the Grant Building³⁵³ was proclaimed "Pittsburgh's largest and most complete office building." The skyscraper, standing near the edge of Pittsburgh's Golden Triangle, rises forty stories, 485 feet, contains 400,000 square feet, and features a five-story parking garage beneath. Its architectural style is corporate Gothic, an eclectic yet gentle blend of English Gothic and Art Deco. Three years were devoted to its construction. The Grant Building's footprint is rectangular, and as the building rises two telescoping masses emerge forming a U shape that embraces a light court. Terra-cotta ornamentation, including spiky finials, dresses the setbacks. Swedish and Belgian granite wraps the Grant Building's lower floors while limestone, buff brick, and cast stone complete the ensemble.

Shortly after completion, the Grant Building's third floor became the home to the pioneer radio station KDKA, America's first to broadcast regularly scheduled radio programs. The top of the Grant was surmounted by an aerial beacon of red neon, a piercing light of three-and-a-quarter-million candlepower. A stout tower of latticed steel supported the light that shone from dusk to dawn flashing "Pittsburgh" using Morse code, a message discernible as far as seventy-five miles with some spotters reporting the beacon visible at 150 miles away - on exceptionally clear evenings. During the Grant Building's infancy one could ascend to the thirty-seventh floor observatory, and for twenty-five cents drink in an astonishing view of the city, its hills, rivers, and skyscrapers.



(237) Grant Building



(238) Luhrs Tower

Luhrs Tower

Phoenix

Henry C. Trost, El Paso

1930

The Luhrs Tower is one of the finest examples of the blending of regional and national architectural styles. The regional adaptation of American Southwest / Spanish and cosmopolitan Art Deco makes this skyscraper unique; sunbursts and foliate designs figure prominently. Its massing is classic Art Deco as the tower is pared back as it rises. Windows are recessed and decorative green terra-cotta spandrels weigh heavily in the building's overall design. Near the Luhrs' summit are relief sculptures of 16th century conquistadors, an obvious nod to the heritage of the Americas.

Phoenix's most famous skyscraper was erected by the father and son businessmen George H.N. Luhrs and George Jr. Groundbreaking ceremonies occurred in March, 1929, and in little over one year their office tower was the tallest building in Arizona. Phoenix, with a population then of only 48,118, with 120 miles of sidewalks and 161 miles of streets, had a skyscraper to be proud of. Although comparatively short by today's standards, the fourteen-story Luhrs Tower is by no means insignificant. Upon completion it commanded the Phoenix cityscape, and today, this landmark adds much-needed romance to the mundane Phoenix skyline.

The Luhrs Tower was designed by Henry C. Trost (1863-1933). In his early years as an architect in Chicago, Trost was a leading draftsman and designer in the offices of William

Le Baron Jenney, Henry Ives Cobb, Charles Sumner Frost, and Louis Sullivan. While at these firms in the 1880's, Trost worked quite fluently in the myriad styles then popular. After 1904, Henry C. Trost worked in partnership with his brother, Gustave.

David Dwight to his business associate, Hamilton:

"Hamilton, I've got what I want; I own this building now. It's mine!"

"You seem kind of crazy about it."

"Why wouldn't I be? They laughed at me when I said I wanted a hundred-story building. They said it wouldn't hold together. But I had the courage and the vision, and it's mine, and I own it! It goes halfway to hell and right up to heaven, and it's beautiful."

"I'll admit that it's an achievement."

"You bet it is! I've achieved something big. Something worthwhile. Feel it under you. It's solid. Even the fiercest storm can't budge it. It bends but it won't break, and it stands here defiant. Hamilton, did you ever stop to think - a million men sweated to build it. Mines, quarries, factories, forests. Men gave their lives to it. I hate to tell you how many men dropped off these girders when it was going up. But it was worth it. Nothing's created without pain and suffering. A child is born, a cause is won, a building is built."¹³⁵⁴

Bank of Manhattan Building

New York City

H. Craig Severance and Yasuo Matsui, New York City

1930

Built as the Bank of the Manhattan Company, this was for a time the headquarters of one of the greatest of America's banks; Its skyscraper's story is about the theatricality of its time. In 1799, this company was founded on the very site at which this skyscraper stands. In the 130 years of the Bank's existence at this location there consecutively stood four headquarters buildings. Then the fifth, and current one, was planned as the world's tallest, a title it never, but almost, secured. Years later, the Bank of the Manhattan Company merged with the Chase National Bank to become the giant banking house known simply as Chase Manhattan Bank. For decades this office tower was simply known by its address, 40 Wall Street, and until much recently as the Trump Building, named after its current owner, financier and real estate mogul, Donald Trump.

Construction of the building began in May, 1929. Excavation and the placing of foundations commenced even before the entire site was cleared of existing structures. This Wall Street parcel covered a little over three-quarters of an acre and it was valued in the millions of dollars. It was not finally decided just how high the building would eventually go, and rumors persisted about the Bank's desire to construct the tallest building ever. In the minds of architects H. Craig Severance and Yasuo Matsui were thoughts only of superlatives. Severance's greatest desire was to erect a loftier tower than his former business partner, William Van Allen, was planning. It was Van Allen who was commissioned to provide for industrialist Walter P. Chrysler "the world's tallest building" in Midtown Manhattan. Revisions, information, and misinformation were supplied to the press. Each camp, through bluff and intrigue, tried to insure that it would be awarded the coveted title. The race was on:

A revision of the plans for the new skyscraper home of the Bank of the Manhattan Company on Wall Street are being considered, it was learned yesterday. If the revised plans are carried out, the structure will be sixty-four stories in height,

towering over the Woolworth Building and rivaling the proposed Chrysler Building at Lexington Avenue and Forty-second Street in height. The project, exclusive of the cost of the land, will cost about \$10,000,000.³⁵⁵

The Bank of the Manhattan Company Building eventually topped-out at seventy stories - an astounding achievement. It soared 927 feet into the air, its lantern and needle-like spire glinting in the sun. Despite Severance's attempt, Van Allen's creation rose still higher; the Chrysler Building stood seventy-seven floors, 1046 feet tall, then the loftiest building in the world. But more importantly, it was the Chrysler Building and Van Allen who wrested the title away from the Woolworth Building, not Severance and his Bank of the Manhattan Company Building.



(239) Bank of Manhattan Building. Photo by author.

Nevertheless, on the Bank's opening day, May 26, 1930, thousands visited and admired the great tower and lavish interiors. A luncheon was given on the fifty-fifth floor and was attended by directors of the company and by none other than Jimmy Walker, then New York City's mayor.

The Bank's new skyscraper was awesome. It took only one year to construct, a miraculous achievement indeed. At the height of construction more than 2,300 men were employed at the site. It contained forty-five *automatic control* elevators which moved at the rate of 800 feet per minute. The Bank occupied the basement (vaults) and the first six floors. Floors seven through sixty-four were for tenants, while floors sixty-five, sixty-six, and sixty-seven housed mechanical equipment. A private gymnasium was even installed on the sixty-eighth floor. Duplex, public observation floors on levels sixty-nine and seventy were reached by high-speed elevators in only sixty-three seconds. The Bank claimed that their structure had the highest observation point above sea level on the Atlantic seaboard (830 feet), and that it could accommodate 100 persons at a time. The observation floors were open daily, and admittance was free. Sadly this landmark vantage point has since closed to the public.

Architecturally, the Bank of the Manhattan Company Building can be considered a modern interpretation of French Gothic. Stacked blocks, asymmetrically arranged, rise to roughly one-half the height of the building. These form the building's giant base. From the center of this assemblage rockets the tower. This square shaft carries the building some 500 feet higher culminating in a great metal cap. This green-colored cap is actually a four-sided, metal, pyramid. It is pierced by twenty-one gable windows positioned on each of its four sides. Above this, in the best of the romantic tradition, is stationed a great, but at the same time a delicate, metal and glass lantern complete with pinnacles. This silver-cut glass lantern was designed to reflect the rays of the sun in prismatic colors. Nightly, the lantern is lighted emanating a bright glow visible for miles.

Unfortunately, a disaster does figure in the building's history. On May 20th, 1946, Lower Manhattan was shrouded in a heavy spring fog. An Army Air Force C-45 transport plane, miles off course, slammed into the Bank's fifty-eighth floor, about 650 feet above Pine Street. The crash occurred at 8:10 p.m. when some 500 people (about one-third of its daytime population) were still in the skyscraper. Miraculously, only the airplane's four passengers were killed.

In 1929:

To visualize the breadth and scope of this exchange, a few statistics are helpful. Organized by leading merchants eighty-one years ago, the Chicago Board of Trade has for several decades ranked first among the commodity exchanges of the world. In a single year it handles nearly 400 million bushels of grain. Its provisions market is second to none. Its five-year-old cotton market, an infant among such exchanges, increased the volume of business six-fold in a year and inaugurated numerous progressive measures which the older cotton markets subsequently found it judicious to adopt....It has been estimated that through the operation of the Chicago Board of Trade 30,000 persons are directly given employment, while 100,000 are either directly or indirectly provided with regular work....The functions of the Chicago Board of Trade are tightly woven into the whole commercial fabric of the nation.³⁵⁶

In 1992:

Within an imaginary semicircle arching from Madison Street and Wacker Drive southeast to LaSalle Street and Congress Parkway lies Chicago's Fertile Crescent – home to the Chicago Board of Trade, the Chicago Mercantile Exchange, the Chicago Board Options Exchange and the Midwest Stock Exchange...In recent years, the CBOT, the Merc, the CBOE, and to a lesser extent, the Midwest Stock Exchange, have emerged as key players in an increasingly integrated world economy.³⁵⁷

Chicago Board of Trade Building

Chicago

Holabird and Root, Chicago

1930

The Chicago Board of Trade is an economic powerhouse. To some it is a money engine, a generator of cash, lots of cash. To others its building is simply a container, nothing more. They perceive it a kind of castle sheltering the "pits," and the phones, the computers, bright-colored jackets, and those little pads of yellow paper – and the stacks of green paper. It is a workplace where thousands converge to make their daily bread. Profit is primary. Architecture is secondary... maybe tertiary.

This institution, the Chicago Board of Trade is *not* its building; it is an exchange, an open market, an idea born of the desire for wealth. This mid-west commodities marketplace was founded on March 13th, 1848. The tall stone building that houses the Chicago Board of Trade is superb. In a city with no shortage of Art Deco "greats" this is perhaps the greatest of them all, the most striking skyscraper of its type in the Windy City. And, there is perhaps no more compelling vista in urban America than that southward view down LaSalle Street terminated by the forty-five story Chicago Board of Trade Building. How fortunate Chicago is to possess such a masterpiece. The Board's first location was in the three-story Chamber of Commerce Building that featured a two-story high trading room. It was designed by Edward Burling in a "French" style, and was dedicated on August 30th, 1865 – just four months after the end of the Civil War. This structure, though faced with local limestone, was swept away in the Great Chicago Fire of 1871.

The Board of Trade's second home, in another "Chamber of Commerce," was completed in 1872, and constructed on the same site (southeast corner of LaSalle and Washington Streets) as the earlier building. It stood three floors, was built to the designs of architects Cochrane and Miller, and vacated by the Board in 1885. Other buildings downtown also hosted the Board as there were numerous relocations throughout the years. The Chicago Board of Trade moved yet once more, but this time it relocated into a building *designed specifically for it*. The building's architect was William W. Boyington and the structure was spectacular. It was completed in 1885 at a cost of \$1.8 million and became an instant success with Chicagoans, partly because this was the city's first commercial building to feature electric lighting. *This* Board of Trade Building, at the foot of LaSalle Street and fronting on Jackson Street, took three years to build, stood nine stories tall, and had a steel and concrete foundation. Street walls were of Maine granite, the alley wall was laid up with 90,000 enameled bricks. The building measured 175 feet wide by 225 feet deep. The main trading floor stood eighty feet tall, was topped with an enormous glass and steel canopy, and was ringed with walls replete with stained glass windows. It was constructed with a steel skeleton and boasted four passenger elevators that made 700 trips per day.³⁵⁸

This Victorian extravaganza measured 135 feet to the top of its main block and supported a tall clock tower that ultimately reached 322 feet.³⁵⁹ On top was fixed a copper weather vane nine feet long and eight feet high that depicted a ship – a nineteenth-century symbol of trade. Not only did this tower contain a two-and-one-half-ton bell, it also contained the makings for record-holding height. In 1885, the Chicago Board of Trade, by all accounts, erected Chicago's tallest building. And it was in this grand building that the Chicago Board of Trade prospered as never before. Samuel P. Arnot, presi-

dent of the Chicago Board of Trade wrote, "Up to 1925, the yearly Board of Trade volume in dollars and cents was the largest of any American exchange."³⁶⁰ History was made here, in the first skyscraper the Chicago Board of Trade constructed as its home. The second skyscraper that the Chicago Board of Trade constructed as its home still stands. In order to build on the plot that the Board already occupied, the earlier landmark, the Victorian behemoth, had to be demolished, and in 1929 that occurred. In 1930, the Chicago Board of Trade, by all accounts, again erected Chicago's tallest building. At forty-five stories, 605 feet tall, this building was also higher than anything man-made between Ohio and the Pacific Ocean. It was big too, boasting 750,000 square feet of rentable office space and a footprint measuring 175 by 255 feet, like its predecessor. This skyscraper, many feel, is Holabird and Root's masterpiece. The rectangular base rises nine floors then breaks into a U-shaped floor plan continuing the perspective of the street. From there the building rises in five setbacks. The culmination of the skyscraper occurs atop its pyramidal roof. On the very top stands a thirty-one-foot-tall, three-and-one-half-ton statue of Ceres, the Roman goddess of grain and harvest, and a first-century symbol of trade.³⁶¹ She holds a sheaf of wheat and a bag of corn. The figure is of cast and brushed aluminum and was designed and executed in Paris by noted American sculptor John Storrs (1885-1956). "Ceres" is supported by a six-ton steel frame.



(240) Chicago Board of Trade Building as viewed from Chicago's financial canyon, La Salle Street.



(241) John Storrs' rooftop contribution to the Art Deco masterpiece of Holabird and Root.

The skyscraper's exterior walls are of limestone and are decorated with characteristically Art Deco patterns. A large clock with Roman numerals is situated in the middle of the

Jackson Street façade and to either side is a monastic-like figure holding a sheaf of grain and an American Indian complete with headdress holding a bag of corn. The metaphor is clear, especially to commodity traders: agriculture, production, transportation and marketing owe much to the "timing" of the trade.

Inside the Board of Trade Building, especially in its three-story-high lobby, exists one of America's finest assemblage of Art Deco artistry. Here can be found polished chrome, transparent and translucent glass, walls finished with nine types of richly-colored marble, ventilation grills with nickel-plated cornstalks, and terrazzo floors whose patterns represent dirigibles and ocean liners. Each of twenty-three passenger elevators features doors embellished with abstract grain motifs, after all, the Board of Trade handles over 400,000,000 bushels of grain per year and this artwork is simply recognition of that.

The vast Trading Room, with its multiple trading pits, is located on the skyscraper's sixth floor, on its north, perfectly in line with LaSalle Street. This cavernous space is identified on the outside by a bank of windows measuring sixty feet tall. Here is housed the world's largest grain market. The pits, raised and lowered wood platforms where buyers and sellers deal, are designated for certain commodities, some of which are corn, wheat, oats, soy beans, rye, cotton, soy bean oil and soy bean meal. Here too, are banks of telephones, electronic price boards (these replaced the original chalk boards), the commodity posts, and hundreds of buyers, sellers, and runners wearing bright-colored jackets clutching little yellow pads.



(242) The forty-fifth floor Chicago Board of Trade Observatory was accessed only by purchasing a souvenir ticket such as this. This 1935, fifty-cent stub represented the pay for hours of labor during the Great Depression.

At completion, the Chicago Board of Trade Building was bestowed with many architecture awards and it became the city's most popular tourist-must-see skyscraper. The building's forty-fifth floor was open to the public and was the highest point from which to overlook the city. The cost for the privilege was only fifty cents, an unattainable sum to the destitute and the out-of-work, results of a deepening depression.

Still, the Board of Trade Building was more than a workplace then, it was a symbol of strength, perseverance, and hope that all was not lost. Today, Chicago without this architectural icon would be unthinkable. It has been, for so many years, woven into the very fabric of this city that every citizen knows it, and in that sense it has become a true landmark of the people.

'Colossus of marketplaces' is a term that appropriately describes a structure that will be the world's largest building, the Merchandise Mart, being erected in Chicago, at the crossroads of American commerce.³⁶²

Merchandise Mart

Chicago

Graham, Anderson, Probst & White, Chicago

1930

Upon opening on May 5th, 1930, this structure was crowned the world's largest commercial building; no building anywhere could come close! The Merchandise Mart, a jumbo skyscraper by any account, fully occupied two *large* Chicago blocks on the north bank of the Chicago River. These city blocks translated into five acres and before 1927 were subdivided into 458 parcels of land. The Merchandise Mart contained a whopping 4.1 million square feet of *rental* space and was truly a city-within-a-city. Three years in the past marked its beginning.

On March 11th, 1927, Marshall Field & Company, the prestigious Chicago-based retailer, and the Marshall Field Estate, announced plans to construct a large commercial building. The building would be multipurpose but primarily it would serve as a "temple to merchandise." The Mart would house hundreds of manufacturer's display showrooms, the homes to *wholesalers* of furniture, fabrics, construction materials, carpeting, wall coverings, artwork, appliances, flooring, and house wares of all types. There would be hundreds of offices, one-hundred retail shops including banks, telegraph offices, cigar and newsstands, barber shops, drug stores, a post office, and restaurants on the first two floors. Floors three through six would be occupied exclusively by Marshall Field & Company for warehouse purposes, all floors above would be let out to wholesalers.³⁶³ The price tag would eventually approximate \$38 million.

Marshall Field & Company approached the noted architectural firm of Graham, Anderson, Probst & White to carry out its plans. The lead designer on board was Alfred Shaw (1895-1970), an architect who, coincidentally, joined the Graham firm in 1927. It was Shaw, the Boston-born architect and new hire, who is chiefly responsible for the design of Merchandise Mart



(243) Merchandise Mart

Construction of the Merchandise Mart was a daunting task. Groundbreaking ceremonies occurred on August 16th, 1928, and only with the vast parcel cleared could one appreciate the enormity of the task.³⁶⁴ Remaining were only tracks of the Chicago & Northwestern Railroad and the Merchandise Mart would be built atop these. Four hundred-fifty-eight reinforced concrete caissons, sunk between eighty and one-hundred feet below grade, would lift and support the whole structure some twenty feet above the tracks and seamlessly meld the Mart with downtown streets.

At any one time some 2,500 men were employed during the construction of the Mart. Contractors installed the following: 60,000 tons of steel, 29,000,000 bricks, 380 miles of wiring, 200,000 cubic feet of stone, 4,000 windows, and forty miles of plumbing pipe. Five miles of interior corridors were lined with six-and-one-half miles of plate glass.

The Merchandise Mart officially opened on May 5th, 1930. It was the pride of Chicago and unquestionably the world's *widest* skyscraper. The main block of the building rose eighteen stories, 240 feet; the central pavilion with tower, a skyscraper unto itself, pushed one-hundred feet higher reaching 340 feet, twenty-four floors. The building was framed with steel and concrete, had a limestone skin, and was trimmed with granite, copper, and polychrome terra-cotta.

Dimensions were staggering, no office building could compare. In plan the Merchandise Mart formed a trapezoid, its south, or riverside length was 577 feet. Its north, or longest side, measured 724 feet. The longest corridors measured 650 feet. Manufacturers, distributors, and importers needed to first visit the lobby's service department for maps and instructions on how to navigate so large a structure. The Mart's daily tenant and visitor population hovered around 25,000 with many using public transportation to arrive. A rail station for commuters was provided in the bowels of the structure. Connections with the city's elevated commuter lines, with direct access into the Merchandise Mart, were an added feature.

The Merchandise Mart's giant lobby was an arena of stone, a subdued but nevertheless delightful Art Deco assemblage of murals and abstract designs.³⁶⁵ It was announced that through it will pass merchants, dealers, wholesalers, retailers, designers and builders of all types. The lobby would be the heart of this international bazaar, the very center of this colossal emporium devoted to consumption, the home to a potpourri of savory stuff. And so it was.

Nineteen floors above the lobby were the Chicago headquarters of the National Broadcasting Company (NBC) and the American Broadcasting Company (ABC). Radio studios were installed first, but soon these were joined by television studios.

Three floors below the lobby is currently the world's largest "ice machine." A pool of water 230-foot-long, twenty-six feet wide, and fourteen feet deep, has twenty-two huge refrigerator coils submerged in it. Nightly, over two million pounds of ice is produced. Each day the ice water is used to air condition the building.

The Merchandise Mart was never acclaimed an Art Deco landmark. Its architectural and artistic impact is felt because of its mass not because of its decoration. The Mart's exterior walls are not profuse with decoration and in some ways they can be characterized as austere. Rather than gushing Art Deco design throughout, the Merchandise Mart offers subdued, but still potent, low relief geometric ornamentation. Its facades become

oversized puzzles of verticals and horizontals, of primary, secondary, and tertiary parts and pieces. Its roofline meets the sky not with a delicate poise, but with broad bravado while announcing "I Am Here."

Corner turrets topped with dulled copper, dusk-glinting windows, and lake-size shadows eloquently describe the Mart in ethereal terms. No matter how many facts and figures are used for Chicago's riverside behemoth, it will always be viewed as a gentle giant.

Carew Tower

Cincinnati

Walter H. Ahlschlager, Chicago

Delano and Aldrich, New York City

1930

The predecessor to Cincinnati's forty-eight-story Carew Tower was the nine-story Carew Building. The earlier skyscraper was described in 1901 as a "fine office building of modern construction and facilities." The building was of Romanesque inspiration and featured bay windows, a seventh-floor arcade, and a stout clock tower; hydraulic elevators climbed to all floors. It was wrecked so that a new and taller "office building of modern construction and facilities" could rise; electric elevators would glide to all floors.

Chicagoan Walter H. Ahlschlager (1887-1965) was appointed architect of record for the new Carew Tower project, while the New York-based firm of Delano and Aldrich served as associate architects. Both the Chicago and New York design teams were eager to collaborate on the planning of Ohio's tallest building. Ahlschlager had recently completed Chicago's Medinah Club Building, one of his few skyscraper designs till then.³⁶⁶ Chester Holmes Aldrich (1871-1940), graduate of the Massachusetts Institute of Technology and the Ecole des Beaux Arts accomplished much in the realm of residential and commercial architecture since forming a partnership with Delano in 1903. William Adams Delano (1874-1960) compiled an impressive portfolio of work including many designs for commercial and religious structures and expensive country estates.

By summer of 1929 the old Carew Building, which housed the Mabley & Carew department store, was demolished. Founded by Cincinnati merchant, John Thomas Carew, the store was a local landmark with a moniker that would outlast any Victorian brick or mortar. In September ground was broken for the new, and much improved, Carew Tower.

As planned, the Carew Tower was the office component in a much greater mixed-use downtown complex. It would be the lynchpin of a focused development that would feature two major department stores, shopping concourses, and a skyscraper hotel.³⁶⁷ The architecture of the complex would be modern, Art Deco, and Cincinnati was promised a landmark development including the tallest skyscraper in the state.

Upon completion in 1930, the Carew Tower forced the eyes of Cincinnatians to gaze skyward. The bold new skyscraper stood forty-eight floors, 574 feet above the sidewalk. Atop the tower was installed an observation terrace where for thirty cents guests were treated to views otherwise only imagined. It was indeed the tallest and, most agreed, the most beautiful downtown. The tower grew from a five-story base and was setback no less than six times. This great cliff of a building was faced with yellow brick, granite, and Indiana limestone.³⁶⁸ Its windows were secured by polished bronze, and when the sunlight shone on the building's face the glass and bronze sparkled, and the shadows

created by the deeply inset wall planes seemed to dance across the Carew's muscular frame. Nightly the Carew Tower was, and still is, lighted by high-intensity lamps making the Carew Tower the unequivocal giant on the skyline.

The interior of the Carew Tower is pure, unadulterated, Art Deco. Fourteen elevators race to the tower's summit and descend into the building's depths—the basement garage with a capacity of 1,200 cars.



(244) Carew Tower



(245) Shell Building

Shell Oil Building
San Francisco
George Kelham, San Francisco
1930

The Shell Oil Building remains a magnificent Art Deco tower at 100 Bush Street, in San Francisco's financial district. When completed, its twenty-nine-story, 380-foot tall profile ranked it *the tallest* of many Shell Oil Company buildings throughout the world.

The Royal Dutch-Shell Group founded the American Gasoline Company to sell gasoline in the Pacific Northwest and San Francisco Bay areas. Shell continued to grow through the formation of several companies around the country. In 1922, these were merged with the Union Oil Company of Delaware to form the publicly held Shell Union Oil Corporation. By 1929, Shell Union was selling gasoline in all forty-eight states. It was in this climate that the home office building in San Francisco was conceived and planned.

On October 8, 1928, a site favored by the company was purchased at the corner of Bush and Battery Streets for \$600,000; here would stand the tower. This skyscraper's cornerstone laying ceremony occurred on November 8, 1929, only one week after the stock market crash that heralded the beginning of the Great Depression. Nonetheless, construction moved swiftly as the city saw the building's structural steel frame grow an amazing three stories per week. At one point, eight stories were enveloped with concrete each week. Opening ceremonies for the completed building occurred on April 16, 1930, after only ten months of construction!

The Shell Oil Building steps back from the sidewalk as it rises. The first ten floors provide a base for the rest of the tower. A central shaft, measuring eighty-eight-feet square, rises another nineteen floors. This shaft postures and pleats as it rises taking full advantage of its position in the surrounding financial district and in the minds of those who view it. Its exterior walls of sepia-colored terra-cotta and glass are striking at dusk; nightly the tower's summit is floodlighted. And of course, the lobby is a masterpiece of Art Deco design with the company's shell symbol appearing often. Below the lobby there is a four-story parking garage with two auto elevators and a capacity of 175. Supporting this, and the building above, is a concrete caisson-type foundation, purportedly the first in San Francisco.

The architect of the Shell Oil Building, George W. Kelham was born in Massachusetts, and studied architecture at Harvard University, in Paris, and in Rome. He practiced architecture in New York City from 1898 to 1908. He moved to San Francisco and won much acclaim for his work, with special recognition for the Shell Oil Building - his first skyscraper commission.

Civil Courts Building

St. Louis

Klipstein & Rathmann, St. Louis

1930

A temple atop a tower best describes the parti of this unusual skyscraper. Completed in June 1930, this Indiana limestone-clad building stands fourteen floors, 385 feet. The lower "office shaft" terminates at the twelfth floor, 245 feet above the sidewalk. Here is the building's piece-de-resistance, a stepped pyramid surmounting an Ionic temple.

A peculiar building indeed, this courthouse's top was modeled after one of the great Ancient Seven Wonders of the World, the tomb of King Mausolus of Caria. This edifice of antiquity was constructed at Halicarnassus in c.350 B.C.E. Of course records are sketchy at best, but the "mausoleum's" design was one of a square, Ionic temple-like form that supported a stepped pyramid above. In St. Louis the architectural firm of Klipstein & Rathman interpreted a design from the ancients and created a memorable twentieth century skyscraper. St. Louis' temple, the colonnaded twelfth and thirteenth floors, housed not a tomb but an extensive law library. It has been suggested that the Civil Courts Building's height was "partly the result of an effort by city officials to afford a higher accessible point than that reached by the near-by Southwestern Bell Telephone Company Building." Not only did the Civil Courts Building originally house the Civil, Circuit, Probate, and Appeal Courts, it also boasted an exterior, public observation promenade that surrounded the twelfth floor.



(246) The very somber Civil Courts Building

*Into the empyrean the builder has flung his handiwork, seeking to pierce the mystery of the ever-unfathomable blue above. And now, one more bold has attained a new eminence, has reached farther than ever toward the stars, has raised a tower that looks down on all the world, has erected the Chrysler Building.*³⁶⁹

*Once I built a tower, up to the sun
brick and rivet and lime.
Once I built a tower, now it's done -
Brother, can you spare a dime?*³⁷⁰

Chrysler Building

New York City

William Van Alen, New York City

1930

Few skyscrapers have the instant and international recognition that does New York's Chrysler Building. Of course its most distinguishing element is the gleaming metal cap and shiny lance that pierce the one-thousand-foot threshold above the concrete. Once the tallest building in the world, the landmark Chrysler remains one of the most favorite skyscrapers of the public, here and abroad. It successfully epitomizes its time and place with verve, chutzpah, and American sparkle.

The Chrysler Building story begins with a developer and an architect. William H. Reynolds was a real estate speculator and head of a syndicate, which, by 1926, acquired the leases, and the property located on the northeast corner of Lexington Avenue and East 42nd Street in midtown Manhattan. He envisioned, with the help of architect William

Van Alen, the construction of the Reynolds Building, a sixty four-story, 800-foot-tall structure. The drawings depicted an inelegant tower, due principally to the inclusion of a clumsy steel and glass dome at top, and arguably, to proportions yet unresolved. The Reynolds Building was to cost \$14 million, and contain 900,000 square feet of rentable office space. In 1928, Reynolds inexplicably surrendered – for a price – the entire project, including architect and whatever leases and architectural plans he so far acquired, to another.

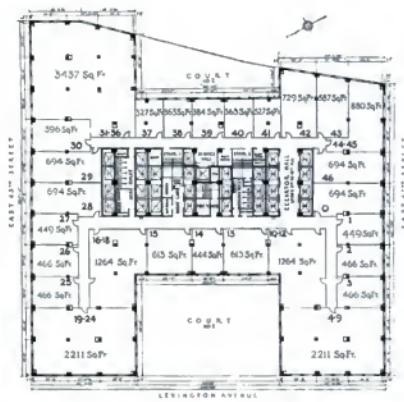


(247) A hauntingly beautiful image of the Chanin and Chrysler Buildings as recorded on October 29, 1929. This day revealed a flag flown on the Chrysler's point and a flock of birds. This day also marked the crash of the stock market and the ensuing Great Depression.

(248) Floor plan of the Chrysler Building, typical floors six through ten. The Architectural Forum, October, 1930, pp. 416.

Enter Walter Percy Chrysler (1875-1940). Chrysler was born in Wamego, Kansas, and early in life became a machinist and toolmaker. He found his way to the Buick Motor Company where he eventually ascended to president and general manager, to General Motors as vice president, and finally he took charge of the Maxwell-Chambers Motor Company in 1920. In 1925 he reorganized the company under the name of the Chrysler Corporation.

Architect William Van Alen (1882-1954) earned, in 1908, the coveted Paris Prize of the Beaux-Arts Institute of Design, one of architecture's highest honors. He entered into the employ of Clinton & Russell, a prominent New York architecture firm eventually finding a colleague and business partner in architect H. Craig Severance. Van Allen and Severance would eventually compete, mightily, to wear the laurels as designer of the "world's tallest skyscraper."





(249) Walter Percy Chrysler (1875-1940) is the man whose dream of a great skyscraper came true. It was his building that, for the first time, stood over one-thousand feet tall and became the tallest structure on the planet. Library of Congress

The design of the Reynolds Building was repeatedly refined until it met the expectations of Chrysler and Van Alen. Though romantic, the glass dome top was scrapped for a more slender, and perhaps equally romantic, cone-shaped top. Proportions were also altered until the "Chrysler Building" was what both men exactly desired. Their cooperation was crucial to the project.

Razing of the old buildings on the site commenced on October 15th, 1928 and excavation began on November 11th. The weight of rock and earth removed from the site was 75,000 tons or sixty three-percent of the weight of the finished building. After excavation was completed concrete foundations were poured to a depth of sixty-nine feet below Lexington Avenue. Foundation work was completed on March 25th, 1929.

With great speed steel erection was started on March 27th, the first rivets of the superstructure were driven on April 18th, and the last structural beam was placed on September 28th, 1929. Four floors were completed per week with no fatalities! This was an extraordinary feat of construction, and indeed, there was a reason.

William Van Alen independently received the commission for the Chrysler project on Lexington Avenue and his "rival", his old friend H. Craig Severance, almost simultaneously got the nod to design the Bank of the Manhattan Building on Wall Street. Each architect and each business interest desired international fame and the opportunity to build, and to own, the world's tallest building. Van Alen and Severance guarded their respective plans and were more than just a little curious about the exact final height of the other's building. The Bank of the Manhattan Company rose seventy stories, 927 feet tall and the

Chrysler was slated at 77 stories, 861 feet. For an instant it appeared that Severance won, he went as high as he could. Then, to Severance, the unthinkable happened.

Secretly, segments of a huge steel spike were transported to the Chrysler Building and assembled. This made the difference. At the building's top its five sections were joined, and together, it measured 185 feet high, weighed thirty-seven tons, and was seventeen feet square at its base. The spire was lifted through the building's "cone" and fastened into place with the help of a powerful "sky derrick." This metal extension was now billed the world's highest piece of stationary steel! In about ninety minutes the yearlong contest was decided: At seventy-seven stories, 1,046 feet, the Chrysler was officially declared "World's Tallest Building."

The Chrysler Building was opened for tenants, and there were many, on April 1st, 1930, and on May 27th none other than Walter P. Chrysler officially and ceremoniously opened the great skyscraper. The public found the building lavish. Wall and ceiling murals were beyond compare. Marble, granite, onyx, travertine, were some of the supplied stones. Japanese ash, English gray harewood, Oriental walnut, American walnut, satinwood, Cuban plumb-pudding wood and curly maple are just some of the woods found in the elevators and other public areas. Costly materials were imported from the state of Georgia and from such faraway places as Sweden, Norway, Morocco, France, Belgium, Mexico, Germany, and Africa. Stone and wood were woven into rich tapestries of Art Deco designs that appear throughout the building.

The exterior, too, is an Art Deco tour-de-force. Its abundance of Nirosta steel makes for one of the most compelling skyscraper surfaces anywhere. Nirosta steel, an alloy of iron, chromium and nickel does not rust, tarnish or corrode. The spire's surface is composed of 4,500 sheets of Nirosta steel as well as all its rivets and bolts. Images of automobiles in brick patterns with polished hubcaps vie for attention with shiny winged Mercury radiator caps that serve as gargoyles on the building's corners. Each day the great crown of cascading chevrons, and spike, sparkle. Each night the summit sizzles, specially lighted, and visible for miles.

A special treat awaited those who ventured into the Chrysler Building – the public Observation Lounge that opened in August 1930. Visitors ascended to the 57th floor from which they transferred to one of the two elevators that glided up to the Observatory. The seventy-first floor Observatory hosted superb Art Deco vaulted chambers, large triangular windows, zigzag terrazzo floors, walls and ceilings painted in a tapestry of suns, planets, stars, and moons. White globes, girded by "spinning" Saturn-like metal rings, served as chandeliers. You could enter the realm of the fantastic, and see all of New York, for a mere fifty-five cents. Alas, it is no more having been closed in 1945.

Floors sixty-six through sixty-eight housed the elite Cloud Club, as described below:

...a luncheon club whose exclusive membership roster numbers fewer than 400 men, every one of whom bears a name that stands high socially, artistically or financially. On the sixty-sixth floor of the club are office, lounge, reception room, grill and oyster bar. On the floor above is the main dining room, private dining rooms, coffee room and kitchens, and above that are the barber shop, baths, rest rooms and dressing rooms.³⁷¹

Gymnasiums occupied the sixty-ninth and seventieth floors. William Van Alen moved his offices to the sixty-fifth floor shortly after the building's completion, and Walter P. Chrysler settled in on the sixty-sixth. The Texas Oil Company was the building's first really big tenant and its offices were located on floors sixteen through twenty-nine; this organization was later renamed Texaco. Shortly after opening the Chrysler Building's tenant roster counted over 150 firms.

The following statistics are offered to better understand and appreciate the magnitude of the Chrysler Building's construction and size:

- 141,000,000 pounds of rock and earth were excavated for the foundation
- 4,856 cubic yards of concrete were poured for the foundation
- 20,961 tons of structural steel was used
- 391,881 rivets
- 3,826,000 bricks
- 446,000 pieces of tile
- 794,000 pieces of concrete block
- 3,862 windows
- 2,788 doors
- 200 flights of stairs
- 2,112 feet of aluminum railings
- 35 miles of pipe
- 15 miles of brass strip for jointing in terrazzo floors
- 10,000 electric light bulbs
- 750 miles of electric conductor wire
- 52,000 square feet of exterior marble
- 112,000 square feet of marble wainscot
- 3,200,000 square feet of surface was painted
- 18 month construction period recorded *no fatalities*
- 112,000 tons is Chrysler Building's weight – dead load (224,000,000 pounds)
- 15,000 building tenants
- 3,000 daily visitors
- 250 employed to manage and maintain building
- 30 passenger elevators, many the world's fastest traveling over 1,000 feet per minute
- 2 freight elevators
- volume is 14.3 million cubic feet
- remains the world's tallest brick-faced building
- first man-made object to stand over 1,000 feet

The Chrysler Building is symbolic of much. It is a personal statement, a phrase uttered by a powerful and wealthy man; this is his monument. It is a metaphor for the burgeoning automobile industry of the 1920's; after all, it too sports radiator caps and hubcaps. The Chrysler Building is the greatest work by an architect whose accomplishments were otherwise neither heroic nor prolific – this was Van Alen's masterpiece *and* swan song. The Chrysler is at once a monument to an age and a relic of the past; it is but one silver trinket on Manhattan's bracelet.

Yet, it is so much greater. A more beautiful blend of style and technology can scarcely be found. In one object, the Chrysler Building, the melding of architecture and automobile

imagery reaches an epic level. Although both the automobile and the skyscraper were conceived of, and born in, the 19th century, these two inventions became symbols of the twentieth. And though the Chrysler Building and its decoration can be traced to earlier times it stands today as a timeless landmark, as one of the greatest of all buildings.

Terminal Tower

Cleveland

Graham, Anderson, Probst and White, Chicago

1930

Cleveland's Terminal Tower and its surrounding complex of buildings remain one of America's greatest urban-scale projects. The Tower, standing fifty-two stories, 708 feet, was once the tallest building outside of Manhattan – the *eighth* tallest in the world. Upon its completion this skyscraper was the pride of Cleveland, the mightiest city in Ohio and one of the mid-west's industrial powerhouses.

Railroad magnates and real estate developers Oris P. Van Sweringen, and his brother Mantis J.³⁷² embarked upon a project that would dramatically change the face of downtown Cleveland. As early as 1918 the Van Sweringens, with other investors, envisioned a giant rail station on Public Square. Throughout the early 1920's many schemes surfaced with one mixed-use offering clearly superior. The Van Sweringens would spearhead the construction of a vast downtown office, retail, hotel, and rail terminal complex with an immense skyscraper at its core. Incredibly, fourteen hundred structures were demolished, 15,000 people were displaced before the complex's construction could proceed. Seven years of toil saw the required removal of three million cubic yards of earth which ultimately produced a splendid thirty-five acre urban complex then second to none. At the time this project was hailed as "the greatest peacetime engineering feat since the digging of the Panama Canal."



(250) Terminal Tower

The topping-out of the Terminal Tower occurred on August 19, 1927 when two workers raised the American flag at its apex. The Terminal Tower officially opened to the public on January 6th, 1930, with the giant Union Terminal commencing operations on June 28th, 1930. That evening floodlights and giant searchlights mounted atop the skyscraper proclaimed the event, their beams being sighted some fifty-five miles away. Joining the Tower and the Terminal were lesser skyscrapers, the eighteen-story Medical Arts Building, Builders Exchange, Midland Building, and the Hotel Cleveland. The Higbee store, a rapid transit commuter station, and a new post office were also included.

Clearly the most visible and impressive element in the complex was the fifty-two-story Terminal Tower. On the forty-second floor was, and still is, the public observatory, the destination of millions since its completion, and where "No visit to the Midwest is complete without this unmatched view."³⁷³ The ten floors above the observatory house communication equipment. The skyscraper contains 2,200 windows, almost eight miles of wire, and 17,800 tons of steel. Exterior surfaces include limestone and cream-colored terra-cotta. In total "Terminal City" cost a staggering \$179 million – *in 1930*. Originally a navigator's beacon, projecting six shafts of light, flashed from the Terminal Tower's forty-ninth floor. Its lights were visible to airplane pilots and ship captains for sixty miles. Currently, each night finds the Terminal Tower's top ten floors brilliantly lighted with white floods, the beacons long since removed.

The Terminal Tower's design, from the Tower's street level arcade to its bulbous top, is both peculiar and romantic. There is something very magisterial about this skyscraper, its very presence commands Public Square and its environs. Its shaft is ninety-eight feet square to the thirty-seventh floor, at which the tower begins to taper. A series of diminishing square plans give way to telescoping cylindrical forms, then the tower rises to the shape of an elongated cone. Along the way are oversized finials, columns, and a profusion of historical decorations. It is an eclectic and proud composition.

Lincoln Building

New York City

J. Edwin R. Carpenter and Associates, New York City

1930

Named after America's sixteenth president, this is the second of New York City's noteworthy Lincoln buildings.¹ This Lincoln Building was inserted into the mélange of skyscrapers surrounding Grand Central Terminal in early 1930. It stands shoulder to shoulder with other office buildings and substantially contributes to East Forty-Second Street's brick canyon and the urban experience it generates. At completion this mid-block slab was Manhattan's eighth tallest, a noteworthy accomplishment in a city with thousands of skyscrapers. It officially stands at fifty-three floors, 673 feet tall.

Generally architectural critics were uncomplimentary to the newly opened skyscraper. Some felt the Lincoln was a lackluster attempt at neo-Gothic architecture. A severe-looking exterior greeted the outside world while a simply adorned lobby, bordering on the monastic, welcomed visitors to the inside. Of course the tan-hued brick building's exterior appeared simplified – especially to eyes more accustomed to the Singer and Woolworth towers.

The stepped-back slab skyscraper was adorned with machicolated parapets and eight Gothic arch "super windows," located at the upper floors for maximum effect – inside and

out. A penthouse, sheltered behind the parapet, was topped with a tiled hip roof. Office tenants, especially on high floors, paid dearly for their vantage points and discovered they got much in return, spectacular views in *all* directions.²

In the late 1920's a consortium of business leaders chose Mr. Carpenter as the architect for their new "investment," to be located at Sixty East Forty-second Street, and named the Lincoln Building. They petitioned for a large building and they were satisfied with the results. The Lincoln contained over one-million square feet of floor space, 922,000 rentable square feet yearly generated millions in income. It featured three subway entrances and was supported by 18,000 tons of structural steel. Its cost was thirty-million dollars and the only neighbor taller was the Chrysler Building.

J. Edwin R. Carpenter (1867-1932), of Columbia, Tennessee studied architecture at the Massachusetts Institute of Technology and at the Ecole des Beaux Arts in Paris. Carpenter established an office in Norfolk, Virginia eventually migrating to New York City where he practiced for the last twenty years of his life. His reputation also includes the designs for skyscraper apartment buildings, some fifty in all, many of which still line Manhattan's Park and Fifth Avenues.

Trustees System Service Building

Chicago

Thielbar & Fugard, Chicago

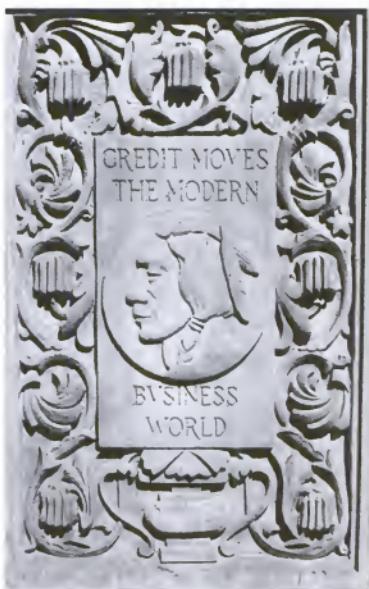
1930

This skyscraper was constructed as the home office and headquarters for the Trustees System Bank and it was the home to many law firms and foreign consulates. One of Chicago's most storied towers of the Depression era, the Trustees System Services Building was under construction during Chicago's most violent period of gangland warfare culminating in the St. Valentine's Day Massacre (2/14/29) and it was completed when Al Capone was the unchallenged "Boss of Chicago." Reportedly, from the building's opening until 1933 when Prohibition was repealed a speakeasy was housed on its twenty-third floor and aptly named the "Skyline Restaurant." The Roaring Twenties is still alive here; the skyscraper's exterior walls are a tapestry of splendid Art Deco decoration and its lobby is a veritable Art Deco museum. How many "gangland associates" arrived here in touring cars and visited the "Skyline?" Still, as then, the elevated trains thunder overhead, wheels screeching as the cars turn the corner of Wells and Lake - only ten feet from the skyscraper's walls. The tracks, their girders, beams, and columns cast long and deep shadows across the face of the building and down to the streets, as always, even when touring cars parked there.

The 336-foot tall Trustees System Service Building is composed of two primary segments, a twenty-story block surmounted by an eight-story tower. The tower, in turn, is topped by a six-step pyramid recalling that of New York's Banker's Trust Building (Trowbridge & Livingston, 1912). The ziggurat top is gloriously garnished with a spiky lantern, all of which is lighted nightly. The skyscraper's exterior walls consist of a four-story limestone base, a middle section of darker purple / brown brick, and tower walls of a yellow / orange brick. The gradation of brick is a delightful device which allows the top to be visually less weighty and appear to be in perpetual sunshine even on an overcast day. Flanking the main entrance is the story of banking and modern finance, told in carved limestone panels by sculptors Eugene van Breeman Lux and his wife Gwen Creighton Lux. Nearby, the value of hard work is recorded by sculptor Edgar Miller in

lead panels depicting various workers in labor.

Inside, a two-story lobby greets visitors and oozes Art Deco decoration, not the least of which is its gold, green, red and gray-colored marbles. Main lobby walls were laid up with rare Numidian marble, a stone from Algeria and Tunisia that ranges in colors from red to yellow. More work by Eugene and Gwen Lux and Edgar Miller can be found here echoing that found on the exterior. Corridors lead deep into the building where seven elevators wait to take visitors upward.



(251) Trustees Systems Service Building. Photo by author.

(252) This image is but one of many sculpted panels that can be found at this skyscraper's main entrance. These limestone images were meant to be both didactic and inspirational: one reads "With Gold Commerce Was Carried Over Seas," the other, "Credit Moves The Modern Business World." How very appropriate for being located on the edge of Chicago's powerful financial district. These images were designed and sculpted by Eugene van Breeman Lux, and have a striking resemblance to the Indian Head Nickel (designed by James Earle Fraser) in circulation at the time of this building's completion. Wall Street's fifty-seven story City Bank Farmers Trust Building (Cross & Cross, 1931) is similarly ornamented, though with giant replicas of the 1930 Indian Head nickel. Photo by author.

Throughout the years this skyscraper has gone by many names, the last of which was the Corn Products Building, awarded in 1949. As of this writing the again-renamed skyscraper, Century Tower, just underwent a massive, \$60-million renovation on the inside and a skilful restoration on the outside. Luxury condominiums now occupy spaces that once held the offices of bankers, lawyers, executives, and the Cuban, Chinese, Belgian, Dominican, Grecian, Mexican, Italian, Honduran, and Hungarian consulates. Hundreds of offices were transformed into studio, one, two, and three-bedroom homes. Building setbacks serve as private terraces, and in some units residents can take a bath where once bathtub gin was sold.

Waldorf-Astoria Hotel
New York City
Schultze & Weaver, New York City
1931



(253) The Waldorf-Astoria Hotel was for many years the tallest and largest hotel on Earth.

After the decision was made to raise the original Waldorf-Astoria Hotel construction began on this, its replacement. Astonishingly this building was completed after only two years, and on October 1st, 1931 Manhattan claimed another swank skyscraper. The Waldorf-Astoria was not just another hotel. This one occupied an entire city block; the hotel measured 201 feet north-to-south and 405 feet east-to-west.³⁷⁴ Eighty percent of it stood over railroad tracks; it rose higher than any other and was larger than any other. It was magnificent at its opening - and is so still.

Considered one of the most famous and elegant hotels in the world, the Waldorf-Astoria is also a building of uncompromising architecture. Its style is subdued Art Deco, its demeanor both reserved yet grand. As one might imagine its grand opening was stellar, after all, the building cost \$40 million. An opening night gala, complete with a tuxedoed orchestra, drew 20,000 guests, and from Washington DC President Hoover (who later became a resident of the Waldorf-Astoria) addressed the crowd, delivering heart-felt congratulations courtesy of the National Broadcasting Company network.

The regal Waldorf-Astoria Hotel was easily identifiable on the New York skyline in 1931. This was the world's tallest hotel, a record it held for nearly a half-century.³⁷⁵ It still

proudly stands forty-seven stories, 625 feet above glamorous Park Avenue. The symmetrical north and south facades are composed of both tower and slab elements, all retreat in stepped-back fashion from the sidewalk. The Waldorf's summit is especially distinctive due to two giant copper-covered domes. These splendid "twin towers" are beautifully scaled and feature Art Deco zigzags and streamlined buttresses. These stratospheric forms, with their fabulous details, are floodlighted nightly and epitomize everything that makes great skyscrapers great.

The Waldorf-Astoria Hotel was, and remains still, both transient and residential. When completed the Waldorf-Astoria touted 2,000 guest rooms and 300 residential suites; this was by far the world's largest hotel. After some seventy years of renovations there currently are 1,410 guest rooms and 106 suites for permanent residents. Floors below the twenty-seventh cater to traveling guests. The exclusive "towers" begin on the twenty-eighth floor and rise to the forty-second. These contain 115 suites, most of which are occupied as year-round residences. Access to the "towers" is via a secure entrance on Fifth Street and four very private, continuously manned, elevators. Thirty-one elevators arranged in two banks further serve the building.

Steel rails and racing trains ply the area where the Waldorf-Astoria's basement should logically be. These travel to and from Grand Central Terminal, five blocks south, and confirm that the hotel was erected on air rights over the tracks. Consequently, two sub-basements extend below the tracks and house the hotel's support services. This engineering marvel also features a private driveway that burrows beneath the center of the hotel, connecting Forty-ninth and Fifth Streets, and offers discretion, convenience, and prestige to the well-heeled.

The Waldorf-Astoria Hotel is a city unto itself and it features an array of guest services. It contains five restaurants, a shopping arcade, twenty-three banquet halls and public meeting rooms, and employs a staff of 2,000. The Waldorf's largest and most celebrated space, the Grand Ballroom, rises the equivalent of three stories and can accommodate 6,000 guests. It measures 130 by 135 feet and is so large that the Ballroom alone could contain the footprints of some of America's earliest skyscrapers.³⁷⁶

Architects Leonard Schultz and Spencer Weaver, whose partnership was formed in 1921, were summoned to design this truly formidable project. The scope was staggering as evidenced by the following:

- world's tallest and largest hotel when completed, yet it was completed in only two years
- 27,000 tons of steel were used
- 3,000 cubic feet of pink granite were employed at its base
- 80,000 cubic feet of Indiana limestone were employed above
- three million gray-tinted face bricks (to match the limestone) were laid for upper stories
- eight million common bricks were used elsewhere through the skyscraper

*I never think of the Empire State Building without recalling a cartoon that appeared from a clever pen soon after the skyscraper's completion. It showed an East-Side Italian matron saying to her proud son, gazing up at the breath-taking spire, "Your old man built that, Tony."*³⁷⁷

Empire State Building

New York City

Shreve, Lamb, & Harmon, New York City

1931



(254) Empire State Building

This is the people's building. Like few others, the Empire State Building is pure inspiration splashed with generous doses of humanity and theatricality. This is the heralded tower that has inspired a melting-pot nation of huddled masses not only to breathe free, but also to accomplish great things. Here is New York's exclamation point, a building so famous it is recognized the world over and admired by countless "Tonys."

In early 1928 a proposal was launched, the idea of a great skyscraper. This office building was to be the world's tallest and would stand in the world's greatest skyscraper city. There were other such announcements, some came to fruition, some did not. This was

different, the Empire State Building would grasp the "world's tallest" crown from the newly completed cross-town rival Chrysler Building and capture the imagination of the nation. For the first time the number of floors in a skyscraper would contain three digits.

The original Waldorf-Astoria Hotel occupied the site upon which the Empire State Building would stand.³⁷⁸ That landmark hotel was threatened with demolition when a syndicate of investors, including such luminaries as industrial and chemical moguls Coleman and Pierre S. du Pont, John Jacob Raskob the founder of General Motors, and other "money men" announced their plans to acquire the Waldorf's coveted parcel. Former flamboyant governor of New York, Al Smith, was appointed president of Empire State, Inc., the newly formed board dedicated to managing the project, seeing to its completion, and most importantly turning a substantial profit.

Working closely with the board was the renowned New York architecture firm of Shreve, Lamb & Harmon. Shreve and Lamb were the form givers. Richard H. Shreve (1877-1946) was born in Nova Scotia, received his formal education at the College of Architecture at Cornell from where he graduated in 1902, and remained there as a faculty member until 1904. Shreve then joined the New York firm of Carrere & Hastings. William Frederick Lamb (b.1883) was Brooklyn-born and studied architecture at Williams College, Columbia University, and at the Ecole des Beaux-Arts from where he graduated in 1911. He, too, was hired at Carrere & Hastings, and while there he met Shreve. In 1920, Richard H. Shreve and William F. Lamb left their employer forging a long and successful design partnership. For their tallest commission the architects laboriously drew fifteen versions of what might have been the Empire State Building, and fifteen times each was rejected by the board of directors. Rejections ceased with the sixteenth iteration, perfection was found, and Manhattan would never be the same.

The stage was set: The site was purchased, preliminary plans drawn, money borrowed, contracts let, and anticipation high. It was 1929. Demolition of the Waldorf-Astoria Hotel commenced on October 1st. Some 700 laborers were employed to wreck the building, so that, in its place would soon stand the world's tallest object. On January 22nd, 1930 site excavation for the Empire State Building began with foundation work starting on March 17th, 1930. Enormous blocks of concrete were placed fifty-five feet below the sidewalk and served as bases beneath the largest steel columns ever fabricated, each weighing over twelve tons to the foot. These 220 colossal columns, working in tandem, formed a large steel-trussed box. From these giants smaller columns would grow upward as girders and beams would reach outward. Steel work progressed quickly once the foundation was intact. Framing rose at the incredible rate of four-and-one-half stories per week. Before long, Fifth Avenue shoppers, newsboys, and "sidewalk superintendents" were craning to see steel-placing sky walkers, riveters, and girder-walking water boys.

And there was plenty to watch. An average of 2,500 men worked at the construction site, and at times 4,000. Following closely behind the steelworkers were various trades: masons, bricklayers, glaziers, plumbers, electricians, carpenters and others. The skyscraper's curtain wall was composed of Indiana limestone, stainless steel, aluminum, granite, and glass. Al Smith ceremoniously laid the Empire State's cornerstone on September 17th, 1930, and by November 13th all structural steel and masonry work was completed for the building proper. The skyscraper was momentously topped-off at 5:42 pm on March 18th, 1931 when the mooring mast's last piece of structural steel was riveted to the mighty beast. Beginning March 22, 1931 the last of the scaffolding was dismantled.



(255) The Empire State Building eclipses a former title-holder to the left, the Metropolitan Life Insurance Building (Napoleon Le Brun & Sons, 1909). Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox, and Tilden Foundations
Photographer: Lewis W. Hine

(256) The Empire State Building stands one-third the way to the Title. Photography Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox, and Tilden Foundations. Photographer: Lewis W. Hine.

The Empire State Building was opened to the public with great fanfare on May 1st, 1931. Officially this was the world's tallest skyscraper: 102 floors, 1,250 feet tall. Al Smith arranged for two of his grandchildren to cut the ceremonial ribbon located at the Fifth Avenue entrance. Investors, architects, builders, politicians, and simply the curious poured into the building. Eight hundred fifty invitation-only guests were treated to a banquet, while thousands prepared to ascend to the observation floors. President Herbert Hoover sent his congratulations, and from the White House he pressed a button to turn on the building's lights. At the momentous occasion kudos were exchanged among those closely connected to the skyscraper's design, construction, and ownership. Three weeks after the ceremonies, William F. Lamb received the plaudits of his profession. He was awarded the gold Medal of Honor from the Architectural League "for the masterful treatment of an office building as exemplified by the Empire State Building."³⁷⁹

Before the building's opening some firms had already taken space in the tower. E. I. du Pont de Nemours & Co. was one of the first tenants and rented three floors. The County Trust Company was the first bank to open in the building, and NBC established a television studio on the 85th floor. Still, the Empire State Building was mostly empty. The years 1931 through 1938 were hard on this gentle giant. The Great Depression loomed large, and locating tenants to fill the skyscraper was difficult. During those years the 86th and 102nd floor observation decks were so popular that the income they produced partially offset losses due to high vacancy. Thousands thrilled at the view from so high a perch.³⁸⁰ Ships could be spotted forty miles out to sea from the outdoor observatory on the 86th

floor. A quick elevator ride to the enclosed 102nd floor afforded an *eighty-mile* vista. From here the ocean's fog, the street hawkers, and the din of the elevated trains lingered as memories.



(257) Alfred Emanuel Smith (1873-1944), much better known simply as Al Smith, was the visionary who served as president of Empire State, Inc., the group of financiers and proponents who constructed the Empire State Building. Al Smith gave the project inspiration and his "face" to an otherwise anonymous business group. Library of Congress.

(258) This little green ticket was the key to the most spectacular view one could have – without flying.

Another diversion for visitors was "the world's highest soda fountain and tea garden." This was opened to the public on June 5th, 1931 and was situated on the eighty-sixth floor, 1,050 feet above Fifth Avenue; more importantly, it was four feet higher than the tip of the Chrysler Building's shiny spike. This tourist destination in black marble and chrome was a streamlined tour de force. For the "people's building" there would be no exclusive rooftop restaurant.

The Empire State Building, an Art Deco colossus, was unique in important ways. But perhaps the most compelling was its top where a sixteen-story, 200-foot-tall dirigible mooring mast was erected.³⁸¹ Anchored to the building's structural system, this mast was to provide service to transatlantic dirigibles, an "airport" in the sky.³⁸² Well-heeled travelers could disembark from an airship through its nose, pass through a giant coupling, and enter a domed reception area – the Empire State Building's 102nd floor observatory.³⁸³ As many as fifty travelers could be accommodated in this manner, and from here visitors could board an elevator for a one-minute ride and entry into America. For travelers to Europe the Empire State Building's terrazzo floor would provide their last contact with America.

To some, the appeal was overwhelming. One could leave a grassy field in France or Germany by airship, and within four days, arrive in the center of the world's greatest metropolis – tying up atop the world's tallest building. Though romantic, this scenario was

unfortunately problematic. On September 16th, 1931 it was reported that, for the very first time, a small privately owned dirigible did indeed moor to the mast. It was made fast at 9:10 a.m., and it moored for three minutes during a forty-mile wind.³⁸⁴ Two weeks later, the silver blimp Columbia also briefly moored, with attempts on the following day unsuccessful.³⁸⁵ Before long, the original intent of the mast was abandoned due to mooring difficulties – unpredictable updrafts, the dangerous nature of dirigibles, and, perhaps most of all, the appeal and modernity of the airplane.



(259) A dirigible moors to a mast easily enough at ground level but atop the world's tallest skyscraper was something else altogether. The mooring mast erected on the Empire State Building was to be frequently and regularly used but its planned service was scrapped disappointing its sponsors and relegating it to nothing more than a quaint dream to hopeful transatlantic travelers. Who now can imagine the Empire State Building without it?

Without this rooftop appendage the Empire State Building was little more than a truncated, albeit tall, shaft of stone.³⁸⁶ With it, magic was produced. The great dirigible mast was pregnant with the power, the force, and the appeal of great height; it was a celebratory gesture in steel and glass. Poking into the belly of the stratosphere it originally invited comparisons to everything from a perfume bottle to a salt shaker. Still, it was so much more. This "architectural device," its absence now unthinkable, was an exquisite way of bringing finality to the ever-upward limestone shaft. After reigning above Manhattan for over seventy years the mast is still the *most compelling feature* of the landmark skyscraper. It cannot be less.

After a slow start the Empire State Building has, for decades, been fully rented and returning a handsome profit to its owners. There are approximately 850 rent-paying firms housed in the building.³⁸⁷ A daytime office population numbers 20,000 while another 40,000 visit during business hours. Each night the top thirty floors, including the "dirigible mast," are brilliantly lighted making the Empire State Building visible for twenty-five miles.

From the moment of its completion the Empire State Building became an icon for New Yorker's and the American people. This skyscraper championed the "little man," where for fifty-cents he could briefly have a better view of the city than any corporate executive. At the building's opening the ceremonial ribbon was not cut by a film star millionaire, or a corporate titan, but by the grandchildren of a one-time fish market laborer from the

Lower East Side. Al Smith was the "little man," the scrappy governor who spearheaded a drive to erect the world's tallest skyscraper. The Empire State Building is a work of art, a marvel of technology, and a mighty symbol of power and progress. But it is also champion of the workers who assembled it, a tribute to the fourteen men who perished during construction, and a friend to the proverbial sons of immigrants like Tony.

Details about the Empire State Building:

- building's height: 102 floors, 1,250 feet tall, (with communication mast: 1,472 feet)
- eighty-five rentable floors, additional sixteen floors include such services as the observation floors and stories solely dedicated to communication equipment
- building was completed in a sizzling eighteen months (from excavation to opening!)
- seven million man hours were logged
- building's footprint: 84,150 square feet
- rentable floor space: 2,158,000 square feet, about forty acres
- contains thirty-six million cubic feet
- original land cost: \$16,230,900
- original building cost: \$24,718,000
- 58,000 tons of structural steel were used
- building weighs 303,000 tons
- seven million man-hours were required in all
- building has sixty-seven passenger elevators, six freight elevators
- seven miles of elevator shafts
- elevators travel between 650 and 1,200 feet per minute
- 1,860 steps from street to top
- seventy miles of water pipes
- 2 ½ million feet of electric cable
- 6,400 windows
- 10,000,000 bricks
- 200,000 cubic feet of Indiana limestone
- 400 tons of exterior stainless steel
- lobby is furnished with Italian, Belgian, French, and German marbles
- building is heat is provided by municipal steam system
- a sixty-ton communication tower, 222 feet tall, was installed in 1951
- lobby rises fifty feet high
- construction claimed six lives: two laborers, one iron-worker, and three carpenters

City Bank Farmers Trust Building

New York City

Cross & Cross, New York City

1931

Now better known as the Citibank Building, this is one of the greatest skyscrapers of Lower Manhattan. It rises fifty-seven floors, 741 feet into the air and it towers over its nearest neighbors; it once ranked as New York City's sixth tallest. A small, five-sided block bounded by William, Hanover, Beaver, and Exchange Place is completely occupied by the Citibank Building. Hence it has three public entrances and lobbies, one each at Twenty Exchange Place, Twenty-two William Street, and Sixty-Five Beaver Street.

When completed, this limestone-clad office tower was known as the City Bank Farmers

Trust Building, then later by one of its addresses, Twenty Exchange Place. Through its various name changes it did, and still does, house one of the largest banking concerns anywhere. A fitting tribute to the goings-on inside are the sculptures located above its first floor windows, Indian head nickels dated 1930. Stone carvings at the fifteenth floor level depict somber-faced helmeted "knights" (bank guards?) glaring down into the narrow shaded streets.



(260) City Bank Farmers Trust Building with the Standard Oil Building (Carrere & Hastings with Shreve, Lamb & Blake, 1922) to the right.

Construction of the City Bank Farmers Trust Building commenced in 1930, and by 1931 it opened to tenants. A six-sided base, rising by multiple setbacks, culminates into a slender tower. The tower is a great square shaft with chamfered corners that conforms to the north-south city grid of Midtown, not to the confusing street pattern of Lower Manhattan. It is these chamfered corners that accentuate its slenderness - a clever architectural device. Citibank's summit is a many-faceted crown of stone with openings positioned to imply a sense of transparency and lightness. This is the skyscraper's master stroke.

Inside are handsomely, not lavishly, appointed lobbies and other public areas. Restrained Art Deco best describes designs here that feature soft tones and barrel vaulted spaces. From these lobbies visitors may choose from twenty-seven nickel-plated elevators to ascend to the pillar of offices far above.

For a street less than half a mile long and but a little more than thirty feet wide, its importance is altogether disproportionate to its mere physical size. It does not lack dignity, however, both sides being lined with buildings of the most costly and imposing character.³⁸⁸

Irving Trust Building

New York City

Voorhees, Gmelin & Walker, New York City

1931



(261) Irving Trust Building

On the celebrated corner of Broadway and Wall Street rises one of the great towers of lower Manhattan, the Irving Trust Building. This skyscraper marks the beginning of the processional march of skyscrapers down Wall Street's canyon. The fifty-story, 640-foot tall, limestone shaft also marks the site of the one-time home of noted American author, Washington Irving (1783-1859). This New York banking institution, founded in 1851, drew upon the name of this early Knickerbocker and formed one of the most successful banking concerns in America.

The Irving Trust Building is a masterpiece of restrained Art Deco design with German expressionist leanings; it is at once a powerful foil to the Gothic-inspired Trinity Church across Broadway and a potent design cousin of Trinity by continuing the verticality of that mid-nineteenth century building. Ceremoniously opened on March 20th, 1931 the Irving Trust became an instant landmark in the financial district. The "Street" was aware that the Trust paid an exorbitant \$15 million for the site in 1928. Real estate concerns were further aware that this fifty story building would soon require tenants. It was announced by Irving Trust that their 2,000 employees would occupy floors one through nine and the fiftieth floor. The remaining forty floors were to be let. Long before the build-

ing's opening some of the most respected investment, law, and insurance firms claimed their territories and were conducting business before March 1931.

The Irving Trust's base measures 110 by 180 feet and completely fills its parcel. Fluted walls and chamfered corners mark this great stone column. Inside is a three-story high lobby unlike any other in New York. Teller cages and private banking spaces were eliminated in favor of a large open floor where all business transactions were conducted behind desks and credenzas. The lobby's walls and ceiling are blanketed with glittering crimson and gold tiles. Below this awesome public space is located more private realms, the Irving's vaults. Buried seventy-two feet below the lobby floor are among the world's largest and most secure bank vaults; socketed into bedrock, these vaults are protected by six-foot-thick outer walls of concrete, iron and steel.

Irving Trust's summit is more noteworthy still. Strong, vertical piers climb from the sidewalk up to the building's top. The fiftieth floor of this skyscraper is occupied by a magnificent aerie, a triple-height vaulted room that still serves as a private company meeting room and lounge. Here, too, stunning red, orange, and gold mosaic tiles still shimmer on the walls and ceiling. Bracketing the room are mullioned window walls that overlook Lower Manhattan's narrow streets.

A twenty-seven story addition to the original Irving Trust Building was completed to the south in 1965. This new steel and glass skyscraper, designed by Smith, Smith, Haines, Waehler & Lundberg, caused the demolition of the seventeen-story, 348-foot tall, Manhattan Life Insurance Building, once the tallest skyscraper in America.

R.C.A. Victor Building

New York City

Cross & Cross, New York City

1931

To fully enjoy and understand this skyscraper one must first learn about the company that erected it. And one financial arm of that company, perhaps the one with most notoriety *then*, was founded in Camden, New Jersey in 1901 – the Victor Talking Machine Company. Victor was the world's most successful and celebrated manufacturer of records and phonographs, and a favorite of recording artists. Its universally recognized trademark was a fox terrier – Nipper – peering into the horn of a Gramophone while he listens to "his master's voice." Despite great successes and a much-loved trademark, the Victor Talking Machine Company was in financial difficulties in 1925 and by 1929 the Radio Corporation of America, more commonly known as R.C.A., purchased it.

R.C.A., in turn, was owned by a consortium of businessmen and radio (later television, too) equipment manufacturers. One such owner was the General Electric Company. The consortium was eventually dissolved, but not before R.C.A. Victor commissioned a new headquarters building in Manhattan.

Two brothers, originally from South Orange, NJ, were summoned to produce a fifty-story skyscraper at East Fiftieth Street and Lexington Avenue. They were John Walter Cross, an architect educated at Columbia University and Paris' Ecole des Beaux-Arts, and Eliot Cross, a real estate developer and Harvard University graduate. Their skills merged to produce a slim chiseled shaft, rich with metaphor and a sheer delight to behold.

The R.C.A. Victor Building remains an important Depression-era landmark and an Art

Deco masterwork. It stands fifty stories beginning from a rectangular base. Setbacks occur at the fourteenth, seventeenth, twentieth, twenty-third, and twenty-sixth floor levels. The lofty tower, with chamfered corners defining it as eight-sided, springs from the twenty-fourth floor rising unimpeded to its summit 642 feet above Lexington Avenue. The building required two years to construct and contains 428,000 gross square feet of space.

Exterior materials include orange brick, orange and tan terra-cotta, and polished nickel. Here is displayed some of the finest brickwork on any skyscraper. Greater still is the use of metaphor. The "spirit of electricity" is celebrated on these facades. The skyscraper's top bursts--with its jagged lightning bolts and flashes of energy, represents the twentieth-century symbols of electricity. These terra-cotta stalactites literally shoot heavenward, piercing the void above, reaching high above the terrestrial building. From dusk till dawn the tower's summit is illuminated portraying bundled electric bolts and almost making audible the crackling sounds they make. Here is a skyscraper infused with power, the energy consumed by radios and phonographs; the whole of the adolescent communications industry is celebrated here. These larger-than-life symbols even portray vibrating Victor phonograph needles in terra-cotta spandrels. Surrounding the building are brick buttresses with capstones pressing against the tower's corners. As Gothic cathedrals were belted by sculptures of saints, demons, and hapless peasants, the R.C.A. Victor Building is embellished by ranks of geometric-shaped faces, carved images of the *twentieth-century* forlorn -- perhaps those *without* radios. Street level shops and bank branches bracket the building's main entrance, marked by a recessed pavilion complete with a segmental arch. Inside is an impressive lobby outfitted with chrome and nickel detailing.

Shortly after the completion of its skyscraper home, R.C.A. Victor abruptly chose to vacate its fifty-story building. R.C.A. Victor took up residence in a newly completed (1933), seventy-story "trophy" skyscraper in Rockefeller Center, the tallest and most prestigious there. R.C.A. Victor became the major tenant of that complex, while the General Electric Company chose to purchase the Lexington Avenue tower to serve as *its* world headquarters. No facade alteration was contemplated -- the electric imagery applied as well to the new tenant as it did to the old.

General Electric remained in this glorious tower until 1974 when the company relocated into a nondescript building in Connecticut. Lexington Avenue's orange skyscraper, the former R.C.A. Victor Building, is currently fully tenanted and enjoys landmark status.

500 Fifth Avenue
Northwest Corner 42nd Street
Sixty Stories High

*Incomparable Appeal. Executives of nationally known concerns
are evincing (sic) a decided preference for this commanding office structure
- because of the priceless prestige of its location on the Best Known Corner in the
World. For Tenants of Character.³⁸⁹*

500 Fifth Avenue Building

New York City

Shreve, Lamb, & Harmon, New York City

1931

Five Hundred Fifth Avenue is an impressive and too often overlooked skyscraper. This

office structure is tall enough that when it was completed it would have been *any other city's* tallest building! In New York, then, its sixty-story, 697-foot profile ranked it seventh tallest. The skyscraper's soaring shaft and classic Art Deco styling uplift the eyelids and allow viewers to experience the majesty of this architectural success.

This office building was the product of Walter J. Salmon, New York businessman and real estate magnate. He presided over the skyscraper's official opening on March 2nd, 1931, which included a luncheon that was attended by many architects, civic leaders, and real estate investors. The fifty-fourth floor served as the scene of the soiree. Mr. R. H. Shreve was in attendance and represented the tower's architects.

Five Hundred Fifth Avenue was completed in a little over one year after excavation began. Steelwork commenced on March 23rd, 1930, and the "general contract" was completed on January 15th, 1931. Finishing tasks wrapped up just before the official opening. At peak construction 2,200 men were employed at the site, and miraculously no fatalities or serious accidents were reported.

The skyscraper's location was a deliberate and a savvy real estate coup. It was built to reign over the important intersection of two of Manhattan's storied thoroughfares, Fifth Avenue and Forty-Second Street. To the south stood the landmark New York Public Library and Bryant Park, and to the east fashionable Fifth Avenue. Tenants paid dearly for the 520,000 rentable square feet in the tower and for the unencumbered views their offices offered. Here business and location were inextricably bound. Considered one of the world's busiest corners, the intersection of "Forty-second and Fifth" was traversed by 175,000 pedestrians and 25,000 vehicles per day at the completion of Salmon's investment.

Five Hundred Fifth Avenue's tower lifts rocket-like from a seven-story rectangular base that measures 100 by 208 feet. The building is served by eighteen passenger elevators, six of which climb to the top. In anticipation of the construction of a building of equal or greater size immediately north it was determined by the architects that the core of 500 Fifth Avenue would be reserved for office use, *not* elevator shaft ways. Instead, elevators were situated along the north wall of a north-placed lobby. Elevator shaft ways are expressed architecturally by unbroken, windowless, masonry strips.

Here stands a skyscraper whose outward form was dictated by New York City's skyscraper zoning laws. The building boasts over a dozen setbacks from sidewalk to summit. This shape allowed daylight and fresh air to blanket the streets around the tower while providing its tenants ample natural light and sometime-forceful breezes. Conceptually 500 Fifth Avenue is composed of "three skyscrapers," a twenty-one story setback building fronting on Fifth Avenue, a thirty-four-story tower to the west, and a cliff-like cloud-scraping shaft in the middle.³⁹⁰ These are tightly bound together at street level, and are understood to be one architectural expression, perhaps even offering "incomparable appeal."

Exterior walls are composed of mostly glass for the first floor and Indiana limestone for the second through fourth floors. Above these the tower is faced with light-colored brick. Terra-cotta detailing is sprinkled on the facade with a particularly heavy dose reserved for the skyscraper's top. The main Fifth Avenue entrance is marked by an opening eleven feet wide by twenty feet high. Its lobby features a travertine floor, carved limestone walls, and a decorative vaulted ceiling. Elevator lobbies are dressed with Belgian

black marble, much polished bronze, and an overall Art Deco dignity.

Olds Tower

Lansing

Hopkins and Dentz, New York City

1931

At twenty-five stories, 345 feet tall, the Olds Tower remains Lansing, Michigan's tallest building. This skyscraper was constructed as speculative office space by industrialist and auto magnate Ransom E. Olds (1864-1950). Olds built the first three-wheeled horseless carriage in 1887, produced a four-wheeled auto in 1893, and developed a gasoline type automobile in 1896. Lansing in the 1930's also was home to the Olds Motor Works Plant, a sprawling factory complex billed as the city's largest industrial enterprise. By 1931, the city could also cite the Olds Tower as a major element in its cityscape.

The Olds Tower is a rather slender Art Deco tower whose facades are faced with stone. Setbacks occur toward its summit reducing the tower's size as it approaches a rooftop spire and aviation beacon. Originally a carillon near the building's top played the 1905 hit song *In My Merry Oldsmobile*. A public observation level was once located atop the building. Contemporary advertisements curiously stated that the observatory was "open always" and "trips to the top by permission of the building manager." The Olds Tower's lobby was originally served by three elevators, the doors of which bore engraved panels depicting a farmer, a locomotive, an artisan, an automobile, and an airplane. Transportation modes were a favorite theme in much Art Deco architecture and decoration and were certainly appropriate for the Olds Tower. In 1954, the Olds family sold the building to the Michigan National Bank who remains the tower's owner.

[the Buffalo City Hall]...expresses primarily the masculinity, power and purposeful energy of an industrial community.³⁹¹

Buffalo City Hall

Buffalo

Dietel and Wade, Buffalo, Sullivan W. Jones, Buffalo

1931

The second largest city in New York boasts one of America's most impressive and tallest city halls. Buffalo's City Hall stands at the foot of Niagara Square, the most important public space in the city and one place from where the building's size can best be appreciated. By all accounts this is a giant building; its broad base supports sizable sets of office wings and a prominent telescoping tower topped by a dome. City Hall is also an Art Deco tour de force, a masterpiece of massing which features a wealth of period decoration. By any measure, the Buffalo City Hall is a significant municipal landmark and a venue of superb public art and architecture.



(262) Buffalo City Hall

An oddly-shaped parcel of land overlooking Niagara Square, measuring 71,700 square feet, was purchased by the city of Buffalo as the favored location for its new civic tower. The planned building's footprint resembled an elongated octagon and measured 315 by 164 feet. It was at this location, on September 16, 1929, that groundbreaking ceremonies occurred. The building's cornerstone was laid on May 14, 1930, and shortly thereafter construction progressed in earnest. Before its completion hundreds of skilled laborers and craftsmen would contribute to this skyscraper's construction; vast quantities of materials were delivered for the largest city hall in the state:

- City Hall boasts 566,313 gross square feet of floor space (316,937 net square feet)
- building support is provided by 180 caissons that rest upon bedrock located from thirty-six to forty-eight feet below grade
- twelve passenger elevators were installed
- glaziers inserted 1,520 windows
- 375 telephones were wired throughout the building
- electricians ran 110 miles of copper wire and seventy-three miles of electrical conduit,
- electricians installed 5,000 outlets and 5,400 switches
- the total project cost exceeded \$6.8 million

The Buffalo City Hall was completed on November 10, 1931 with building dedication ceremonies officially taking place on July 1, 1932—a lengthy and no doubt very arduous thirty-four months after groundbreaking. This skyscraper stood second tallest building in the state outside New York City, and it was magnificent: it towered thirty-two floors, 378 feet.³⁹²

Exterior materials employed by architects Dietel and Wade were gray granite for the building's base, gray Minnesota limestone, yellowish sandstone from Ohio, and polychrome terra-cotta. The City Hall's style is a robust example of Art Deco, not the Art Deco of Rockefeller Center or the Board of Trade Building, but the idiosyncratic Art Deco of profuse decoration with underlying Byzantine influences a la the American Insurance Union Citadel. Dozens of chamfered edges, advancing and retreating masses, an eight-sided "drum" topped by a tiled dome, decorative friezes rich in allegory and metaphor, and an eccentric entry colonnade offer much that is exotic to the viewer's eye. As architecture it is both futurist and historicist, an artistic exploration to be applauded.

Public areas inside the Buffalo City Hall are generously distributed with large murals depicting the virtues of good government and the benefits provided: Charity, Construction, Protection, and Education. The "common man," too, is celebrated and is depicted by images of great lakes shipping, steel manufacturing, agriculture, and general industry. References to early pioneers, the Iroquois Nation, the construction of the Erie Canal, and to Buffalo's urban spirit, figure prominently. On the thirteenth floor is the 383-seat Council Chamber with its magnificent stained glass ceiling. An outdoor promenade encircles the twentieth-eighth floor and offers guests dramatic views of Buffalo, Canada, Lake Erie, and the mists of Niagara Falls.

For years after the Buffalo City Hall's completion it was one of America's most lighted skyscrapers and it could be spotted for some twenty miles away. Originally 369 flood lights, each with an average 350 candlepower, were trained upon the lower mass and, especially, the building's tower. Additionally, there were rotating aviation beacons positioned at the building's top; years ago these were removed. The Buffalo City Hall is still lighted, although less spectacularly than in the 1930's.

The romance of the Buffalo City Hall sprang from the mind of John J. Wade, its chief architect. Born in Hoboken in 1893, Wade studied architecture in New York City at the Beaux-Arts Institute and later worked under such established practitioners as Henry Hornbostle and Sullivan W. Jones. In 1926, just in time to secure the City Hall commission, Wade and fellow architect George J. Dietel (1876-1974) formed a partnership.

Alfred E. Smith State Office Building

Albany

Sullivan W. Jones and William E. Haugaard, Albany

1931

In 1931, after three years of construction, the giant tower touted as "Albany's greatest skyscraper," a building of "virile modern style" was completed. It was first simply titled, in true bureaucratic fashion, the State Office Building. In 1945, it was renamed after Alfred E. Smith (1873-1944), American political leader, four times governor of New York, and in 1928 was unsuccessful candidate for President of the United States.

The building's Art Deco design originated within the state Department of Architecture, then under the direction of the commissioners of architecture, Sullivan W. Jones (1878-1955) and William E. Haugaard. A Brooklyn-born architect, William Haugaard (1889-1948) was appointed to the position of State Architect in 1928. He studied architecture at the Massachusetts Institute of Technology, the Pratt Institute in Brooklyn, and in Europe. He oversaw state building projects such as office buildings, schools, hospitals, and prisons. That for which he will perhaps be best remembered for is the Smith State Office

Building.

This great setback office building makes a colossal footprint. From there, it rises to thirty-four stories, 388 feet. Its exterior is of granite and limestone. Upon completion it was Albany's tallest building, and promoters boasted that it was the tallest building from Montreal to New York City, and from Buffalo to Boston.

The Alfred E. Smith Building houses over 2,200 office workers. Upon entry into the skyscraper people pass through a luxuriously appointed Art Deco lobby. Bronze elevator doors, grilles and light fixtures contribute much to this space. There are flamboyant chandeliers, carvings, and a brass inlaid Zodiac map in the lobby's floor with the depiction of the Half Moon - the ship Henry Hudson sailed up the river that today bears his name.

Since its opening, the tower featured a public observation floor at the thirty-first level, 350 feet above the street. After forty-five years it was closed, due to the new venue offered by Albany's Corning Tower (Harrison & Abramovitz, 1983). The new Empire State Plaza skyscraper stands 44 floors, 589 feet tall. Its observation floor is the 42nd, 562 feet above grade. Thus, the torch is passed.

*Architecture is the alphabet of giants; it is the largest set of symbols ever made to meet the eyes of men. A tower stands up like a sort of simplified statue, of much more than heroic size.*³⁹³

Cities Service Building

New York City

Clinton & Russell, New York City

Holtot & George, New York City

1932

This Art Deco skyscraper, renamed the American International Building, rises sixty-seven floors, 965 feet high. For decades, it was the loftiest in Lower Manhattan but currently ranks third tallest there behind the World Trade Center towers. Still, the American International reigns as the tallest privately owned skyscraper downtown, and it is still the world's second tallest brick-faced building, narrowly topped only by the Chrysler Building.

This skyscraper was originally known as the Cities Service Building, and it served as this oil company's home office and world headquarters. The building took a little over one year to construct and it was completed in 1932. Tenants began taking occupancy in April, and the skyscraper was formally opened to the public on May 13th, 1932. The building's net rentable office space is 800,000 square feet; some of this went empty due to the building's completion during the depths of the Great Depression. A pedestrian bridge and an underground tunnel linked the skyscraper with another building to the south, a building which as it turned out, fronted on Wall Street. By acquiring this property at Sixty Wall Street, the tower, standing at Seventy Pine Street, could assume the more prestigious "Wall Street" address and be more closely associated with business on "The Street." After the Cities Service Company relocated, the building's new managers simply named the structure Sixty Wall Tower. This prestigious "address" name stayed with the building for decades and is occasionally still referred to as such.



(263) Cities Service Building with neighbors Bank of Manhattan Building (H. Craig Severance and Yasou Matsui, 1930) and Irving Trust Building (Voorhees, Gmelin & Walker, 1931) to the left.

In the 1980's the American International Group, an insurance and financial services firm, purchased Sixty Wall Tower to serve as its corporate world headquarters.

Occupying roughly three-quarters of an acre, the base of the American International Building serves as a stepped podium for the great tower above. Exterior surfaces include American Oriental granite from Minnesota, dark gray Indiana limestone, and a whopping eight million bricks. The building has 3,000 double hung aluminum windows, and it is supported by 24,000 tons of structural steel. A delightful seven-foot tall, carved-stone model of the building stands adjacent to each of its two main entrances, those located on Pine and Cedar Streets.

One of the finest Art Deco office lobbies anywhere can be found here. Multicolored marble floors and rippling marble walls are accented by sunburst-styled metal and glass fixtures. Polished nickel-plated doors, window trim, radiator screens, and a building directory case give sparkle to this masterpiece of a lobby. From here a visitor can catch any one of twenty-six elevators. The express cabs travel 1,600 feet per minute and they are among the fastest in the world. In January of 1932, eight tandem, or double-deck, elevators were installed by the Otis Elevator Company, the first of their kind anywhere. These still climb the skyscraper and travel at speeds of 1,000 feet per minute still serving two floors at a time.

The summit of the American International Building is one of the most compelling anywhere. The skyscraper, through dozens of setbacks, eventually abandons brick and reveals stone facades, glass, and metal grillage. At the very top is a thirty-three foot-tall, cascading glass, luminous "cube." And just below this is the Observation Room, a popular tourist destination where admission was only forty cents, children under eight were free. Thousands of visitors paid for the pleasure of looking over Manhattan and gazing out to sea from one-fifth of a mile above the financial district. Alas, it has closed.

During the day the American International Building cuts a noble profile among lesser giants. But by night, that cube of glass brightens and lamps positioned on the various setbacks, trained on the creamy stone, glow. The old Cities Service Building, as it did then too, clearly and decisively contributes to what many considered the epitome of urban skylines, Lower Manhattan. This Oz would be incomplete, or at the very least less potent, without this great building.

*And the P.S.F.S. building, which is a tower, has four different sides because it recognizes its specific urban setting: party walls, street facades – backs, fronts and corner. Here the freestanding building becomes a fragment of a greater exterior spatial whole*³⁹⁴

*The early modern, or International Style, skyscrapers are few in number; they required clients with cash, courage, and a highly developed sense of aesthetic mission...and the Philadelphia Savings Fund Society building of 1930-31, by Howe and Lescaze, is a total work of art.*³⁹⁵

PSFS Building

Philadelphia

Howe and Lescaze, New York City

1932

The Philadelphia Saving Fund Society, once billed as America's oldest Savings Bank, commissioned the construction of this altogether delightful building. This thirty-two-story skyscraper was raised as its headquarters, and soon after became the most celebrated depression-era skyscraper outside New York. It challenged, but did not top, Philadelphia's then tallest building but became an important *modern* landmark and *foil* to the gallery of historic buildings that surrounded it.³⁹⁶ The PSFS Building's distinctive massing, gridded curtain wall, ribbon windows, curved surfaces, lack of applied ornament, and flat roofs anchor this design well within the precepts of the International Style. This skyscraper was forward looking and it anticipated the transformation of the skyscraper from an all-too-often lumbering masonry pile to a prismatic statement of cantilevers and glass.

Downtown Philadelphia's South Twelfth Street is home to this exemplar of the International Style. The PSFS Building rises 491 feet and contains some 300,000 rentable square feet of floor space. Conceptually a T-shaped tower of twenty-seven floors rests upon a five-story rectangular base.³⁹⁷ The "base" was designed to house a three-story banking hall, a retail component, and celebrated entry for office tenants. A rooftop penthouse originally housed a private suite for the bank's board of directors and an enclosed public observatory. The building's top also features a giant steel wedge that supports "PSFS" in twenty-seven foot tall letters. Nightly these neon letters glow making their red *moderne* script visible for more than twenty-five miles; these sans-serif letters were an advertising tour-de-force and an important nocturne element in Philadelphia.³⁹⁸



(264) Philadelphia Savings Fund Society (PSFS) Building

Though some seventy years old, the appearance of PSFS Building remains fresh and elegant. Curtain walls employ a host of materials that include limestone, smooth brick, polished granite, and windows trimmed with aluminum. Here stood a structure that some felt was a masterpiece of the International Style, a champion of design criteria first trumpeted by the European avant-garde, and they were right. Howe and Lescaze put into practice concepts of universal space, cutting edge technology, and the elimination of applied ornamentation. One term best describes the skyscraper's interior spaces – *streamline*. Its seventeen elevators, escalators, stairwells, light fixtures, wall clocks, and an abundance of furniture were smooth, sleek, and sensuous. Banking offices and public areas on the mezzanine level featured serpentine walls, hard surfaces, curved windows and no apologies to Vitruvius. American banking would never be the same.

Perhaps one of the most forward-looking features of the PSFS Building, as if the aforementioned were not enough, each bank employee and all building tenants had access to central air conditioning. Revolutionary in 1932, it was decided that this skyscraper would be the second one to employ such an amenity.³⁹⁹

New York architects George Howe (1886-1955) and William Lescaze (1896-1969) formed a partnership in 1929, shortly before they began working on the designs for their

most celebrated, and tallest, commission – the PSFS Building. George Howe was educated at Groten and at Harvard University. Howe also studied at Paris' Ecole des Beaux Arts prior to calling Philadelphia his home in 1913. While in his twenties Howe found employment with Furness, Evans & Co. and other architecture firms there. William Lescaze was born and studied architecture in Switzerland. He moved to New York City in 1923 eventually finding Howe. Lescaze was a strict modernist, then the most vigorous proponent of the International Style in New York City. His designs (including one for his own home [1934] on Manhattan's East Side) continued to be revolutionary, impeccably crafted, and stellar examples of the International Style.

Louisiana State Capitol

Baton Rouge

Weiss, Dreyfous and Seiferth, New Orleans
1932

The Pelican State is home to America's tallest statehouse, the Louisiana State Capital which stands thirty-four floors, 450 feet tall. It is currently one of only four "skyscraper"⁴⁰¹ state capitols in the country, the others being in Nebraska, Florida, and North Dakota.⁴⁰²

The construction of the Capitol was undertaken during the depths of the Great Depression and during the term of Louisiana Governor, Huey P. Long (1893-1935).⁴⁰¹ Long sponsored the building of the new capitol building and he personally oversaw each aspect of the project insisting three requests be fulfilled: 1) that the structure be of high visibility, 2) the building should be a monument to the state and its people, and 3) the new capitol be completed during his term as governor. The stage was set: \$5 million was allocated for the new building, a site was chosen on the old campus of Louisiana State University – now twenty-seven acres of landscaped grounds, and an architectural firm was secured. Construction began in December 1930 to the plans drawn by the New Orleans architectural firm of Weiss, Dreyfous and Seiferth. Before completion more than 2,500 train carloads of material including hardwoods and stone would be delivered to the construction site for inclusion into the great skyscraper.

Dedication day arrived May 16th, 1932. Louisiana's greatest Art Deco skyscraper was completed and opened for perusal by the public. What they saw was a large office building of 249,000 square feet that held the chambers for the Senate and House of Representatives – located in the wings on either side of the tower, all state executive and clerical offices, galleries, and various ceremonial spaces. On the 27th floor, at 350 feet above grade, could be found the public observation floor offering views as far away as twenty miles; after seventy years the observatory is still open to visitors.

The Louisiana State Capitol is a superb example of Art Deco design. Throughout the structure are low relief panels depicting the history and life of Louisianans. Bronze friezes, and a rich assortment of materials including some thirty types of marble and stone contribute to its dazzling interior. Louisiana produce and wildlife figure prominently as modern design motifs and include representations of eagles, crayfish, egrets, cotton, magnolias, sugarcane, and of course pelicans. The exterior of the Capitol is faced with Indiana limestone and hosts an array of carvings and statuary groups. High on the tower, at the level of the twenty-second floor, four allegorical figures hug the corners and represent the virtues of Philosophy, Art, Science, and Law. Topping the Capitol is a powerful beacon that shines nightly.



(265) Louisiana State Capitol



(266) St. Paul City Hall

St. Paul City Hall and Ramsey County Courthouse

St. Paul

Holabird and Root, Chicago

Ellerby and Company, St. Paul

1932

In a city accustomed to its prominent buildings designed in the Classical, Romanesque, Medieval, and Baroque styles, the new sleek and modern City Hall must have looked somewhat alarming – at first. With its completion in 1932, the City Hall culminated a century of design quality matched by few other American cities. From the homes of lumber barons and bankers to civic structures and early skyscrapers, St. Paul has set for itself a high standard and has continued to meet it. The City Hall, finished when St. Paul counted only 271,000 people, was heralded as yet another landmark in a city of landmarks.

Still standing proudly, the Art Deco-styled City Hall was dedicated on December 19th, 1932 and it originally cost \$4 million. The skyscraper rises twenty stories, 261 feet tall. Its exterior materials include Indiana limestone, Wisconsin Rosetta Black granite, and metal-trimmed glass windows. As planned the building was to house two levels of government, the city and the county. Approximately two-thirds of the building is occupied by Ramsey County offices while the remaining space is devoted to the functions of the City of St. Paul.

Entrance doors to this civic structure are nickel-plated and employ a streamlined design.

Visitors enter the Memorial Hall, which serves both as the building's main entrance lobby and also as a room dedicated to those Ramsey County soldiers who perished in World War I. This is a three-story-high marble-walled space measuring eighty-five feet long by twenty-one feet wide. It has a mirrored glass ceiling, black marble walls, and is dimly lighted. The focal point of this Art Deco extravaganza is a giant onyx sculpture entitled *Indian God of Peace*. It was designed by noted Swedish sculptor, Carl Milles (1875-1955). The sixty-ton figure stands thirty-six feet and is carved of white onyx from Mexico. The figure is composed of ninety-eight blocks, which are joined in thirty-eight sections. Its base depicts a circle of Indians out of which emerges a human-like figure, the *God of Peace*. This great sculpture oscillates on a turntable sixty-six degrees to the left and sixty-six degrees to the right. Each 132-degree rotation requires two-and-one-half hours.

The building's elevator lobby and adjacent entrances display ceilings of gold leaf. Six, brass elevator doors offer (in low relief) art deco-styled panels depicting themes of this city, its life, and its history. The St. Paul City Hall and Ramsey County Courthouse, though more than a half-century old, still reigns as a superb civic structure. It serves as icon, as temple, as landmark, and as a skyscraper that cuts a handsome profile on the skyline of St. Paul.

People's National Bank Building

Tyler

Alfred C. Finn, Houston

1933

Tyler, Texas, was a relatively small city of 12,785 (1930 population) when this sixteen-story skyscraper was constructed. The People's National Bank constructed this trophy skyscraper there, an object of civic pride usually found in larger metropolitan areas. Located midway between Dallas and Shreveport, Louisiana, this city stands in the center of the east-Texas oil fields and near to the headquarters of many oil companies. That industry, with banks, attorneys, insurance concerns, and advertisers in tow, would have been good fodder for the real estate men charged with renting space in this, Tyler's tallest building. Of course design sells, and good design sells especially well-in good times. The People's National Bank Building opened during the depths of the Great Depression and most likely was indeed a challenge to fill; the new skyscraper offered 69,815 square feet of rentable space.

The design of Tyler's finest skyscraper was simple and elegant. Its form steps back twice from the street in an attempt to no doubt mitigate the difference in scale between itself and the remainder of Tyler's downtown, then filled with blocks of one and two story commercial buildings. The size of the People's National Bank Building cannot be seen as threatening or malicious (then or now) rather, it represented a healthy change of context. This skyscraper's exterior proudly displays its Art Deco design. The first floor is trimmed with black granite while upper floors are finished with buff brick and cast stone spandrels. Vertical window "striping" cleverly suggests its own loftiness.

The People's National Bank Building was one of many skyscrapers designed by Alfred Charles Finn (1883-1964). He completed the plans for the ten-story Foster Building (1914), the seventeen-story addition for the Rice Hotel (1926), the sixteen-story Lamar Hotel (1926), the eleven-story Kirby Building, and the thirty-seven story Gulf Building (1929)-all in Houston, and the eighteen-story Electric Building (1929) and the nineteen-story Fair Building (1930) in Fort Worth; the People's National Bank Building was the culmination of his skyscraper work. In addition he designed many private residences,

churches, movie theaters, hospitals, and the 570-foot tall San Jacinto Monument (1939) in Houston. Finn was well prepared for all architectural tasks as a result of his eight year tutelage (1904-1912) with the noted architecture firm Sanguinet and Staats of Dallas. In 1913 Finn began his own practice in Houston, the city where he remained until his death.



(267) People's National Bank Building



(268) RCA Building in Rockefeller Center

RCA Building

New York City

Associated Architects, New York City

1933

This building exhibits no timidity. There is subtlety, there is integrity, there is artistry, and there is pride – pride of place, and pride in achievement. The Radio Corporation of America's skyscraper was, and probably always will be, the linchpin of a Depression-era development called Rockefeller Center. The wealth and personal commitment to this project by John D. Rockefeller Jr. earned his surname in yet another place for posterity and honorable mention in the annals of architecture.

The development's trophy parcel, and tallest skyscraper, was erected as a purely speculative investment. Its primary tenant, and as such holder of the building's naming rights, was RCA, the giant electronics and entertainment company that achieved much and

made unparalleled inroads into American society. The RCA is but one of an original group of fourteen buildings, mostly skyscrapers, that has influenced architecture and urban planning as few others have before or since. Here was an architecture of coordinated units, of harmony and sheer joy.

A distinguished team of architects was assembled to compose and bring to fruition this ensemble in stone. Included in the orchestration were the firms of Hood, Godley & Fouilhoux; Corbet, Harrison, & MacMurray; Reinhard & Hofmeister; and Carson & Lundin. The director was Raymond Hood. Rockefeller Center and its RCA Building were a long time coming and countless variations surfaced before a design was arrived at. By April 1931 all architectural drawings were finalized and by June 2nd site demolition commenced. Excavation began on July 31st, 1931. The song of the pile driver, jackhammer, and rivet gun was silenced after only two years.

At completion in 1933 the RCA Building was proclaimed New York City's, and the world's, fifth tallest building. It stood seventy stories high, 850 feet into the sky; its slab-like form was unlike anything previously known.⁴⁰² Standing like so much bundled slate, this giant was sensational. Its sliced form was dazzling, creamy-white and positively overwhelming – especially when viewed from the north or south. Seen from the east the RCA adopts the mantle of a plowshare cutting a furrow between lesser masses, overturning space from east to west; What majesty! Its tightly wrapped exterior skin and chiseled profile rank this as one of America's more noteworthy Art Deco landmarks, a flavor of Art Deco without the robust persuasion of the Chrysler Building. Exterior materials employed on the RCA Building were an epic amount Indiana limestone, light-colored granite, gray-colored aluminum spandrels, terra-cotta for some trim and details, and of course glass. Though later buildings would obscure some of the RCA's initial visual appeal, this skyscraper has maintained its presence on the midtown skyline.

The interior of the RCA Building was unlike any other. Office space was designed with special attention given to details, fine materials, and above all modernity. The first major tenants to avail themselves of 30 Rockefeller Plaza were of course RCA, and signing a long-term lease for space was the National Broadcasting Company – NBC – and its various affiliates.⁴⁰³ The RCA Building contained 2.7 million square feet of space including vast lobbies, offices, commercial shops, and twenty-one radio and television studios. The design and engineering of these studios were unique. An ingenious method was arrived at to satisfy NBC executives' concerns regarding silence in broadcast areas. It was decided that external vibrations and unwanted noise would best be eliminated by segregating these "quiet zones" from the supporting structure of the skyscraper. Consequently, felt-padded steel clips located at critical junctures along with other measures were employed to help provide the desired separation.⁴⁰⁴ After all, this was the heart of NBC's 205-station radio network.

The RCA Building also provided its tenants and their guests fifty-eight passenger elevators, a subway station, and a five-level garage for 800 cars. Beneath the RCA are underground concourses and two-way streets that bind it to the rest of Rockefeller Center. Promoters stressed that no office worker would sit more than twenty-seven feet from any window, thus guaranteeing access to fresh air and a view for all. Furthermore, the building and its environs reveal a wealth of twentieth-century design in the form of Art Deco murals and sculptures.⁴⁰⁵ In 1934 the glamorous, and equally streamlined, Rainbow Room opened to a dazzling reception on the sixty-fifth floor; there was no nightclub higher.

Positively stratospheric some said of the two-level *rooftop promenade*, complete with ample seating, landscaping, and of course telescopes. Visitors were awe-struck. Here people were free from confining walls and were able to stand on the roof of a seventy-story skyscraper. They drank in a fifty-mile view including New Jersey, Connecticut, Long Island, and the Atlantic Ocean beyond. This aerie was reached in fifty seconds as high-speed elevators whisked guests from the first floor to the observatory. No other public observatory was quite like it, and all for a mere fifty cents. This haunt of dignitaries, lovers, and out-of-towners was closed in the late 1970's, a lamentable act indeed.

The RCA Building is the premier component of which many regard as the most successful urban complex of its type anywhere. In 1976 the Journal of the American Institute of Architects queried those most respected in the field of architecture to name the twenty best office buildings ever erected in America. The most often mentioned were the original group of buildings comprising Rockefeller Center, which of course possesses the flagship RCA Building.⁴⁰⁶

*...the erection of a "skyscraper" on the plains of North Dakota was not the whim of architects determined to be different at all cost, but rather the demonstrably logical solution in modern times of a complex and peculiar problem. The result is a structure for the people, beautiful, efficient, and economical.*⁴⁰⁷

North Dakota State Capitol

Bismarck

Holabird & Root, Chicago

Joseph B. DeRemer, Grand Forks

William F. Kurke, Fargo

1934

Much changed for North Dakotans on December 28th, 1930, for on that evening its state capitol was destroyed by fire. That event presented to North Dakotans the opportunity of a lifetime, a chance to erect a *new statehouse* that better reflected their values and aspirations. The culture of the upper plains, of the twentieth century, could now be represented in contemporary language, in a proud way by which their children and the nation might remember them. That fire presented an opportunity for self expression and recognition, an opportunity North Dakotan's did not squander.

In February, 1931, a committee was formed to select an architect and to prepare plans for a new state capitol building whose cost was not to exceed \$2 million. Sixty firms were queried and at "no time was any architect asked to submit a sketch of any sort." Curiously, "the entire selection was on a basis of past performance."⁴⁰⁸ In August, 1931, the Chicago firm of Holabird & Root was chosen as the architects in charge and they were to be assisted by two North Dakotans, Joseph B. DeRemer and William F. Kurke. After laboring for almost one year, the design team presented the plans and a general contractor was chosen, Lundoff and Bicknell of Chicago. On August 13th, 1932, a groundbreaking ceremony occurred, and soon after work began on what was to be the state's tallest building.



(269) North Dakota State Capitol

The North Dakota State Capitol was completed after eighteen months of construction. The Legislature convened in their new skyscraper for the first time in January, 1935. Their new building was one of only three "skyscraper capitols" in America, the others being in Louisiana (1932) and Nebraska (1932).⁴⁰⁹ Without question, North Dakota's was the most contemporary being an example of the streamlined Art Deco style. This new skyscraper looked new because it was new: in 1934, *twenty-four of America's forty-eight state capitols had domes* and North Dakota's was flat-topped, a commendably modern and refreshing response. It looked like a modern office building because it was so. No Baroque dome, no classical columns; straight lines, cubic forms, and streamlining – period.

The tallest building in Bismarck was a nineteen story building, a steel-frame skyscraper that rose 242 feet above the prairie. The office tower measured ninety-five feet square, its base stretched 389 feet east-to-west, 174 feet north-to-south, and in total the building contained 210,000 square feet of floor space. It was large and it was a sight to behold, visible for miles around. Nothing rivaled it. This skyscraper, a building for the people and the governor, was a stunning addition to the city.

A parcel of land, some 132 acres of parkland, was the setting. The North Dakota State Capitol stood in splendid isolation, a Holabird & Root skyscraper that was not hemmed-in by other of its species. Here stood a skyscraper that was, and is still, a symbol of power and democracy, of modernity, of courage, and of the ability of *architecture* as a force of communication; *architecture* cannot be expected to accomplish more.

The Capitol's exterior is faced with Indiana limestone including a base course of polished black granite from Wisconsin. Inside the tower are dozens of clerical offices, various meeting rooms, and the offices of the Secretary of State, Attorney General, and the Governor. The low rise wing is the home to Senate and House chambers, committee rooms, a law library, and the Memorial Hall featuring forty-foot-high polished marble walls. Public spaces are adorned with a variety of polished stone: gray Tennessee marble, Rose

Montana travertine, Belgian Black marble, and terrazzo. Walls and trim are executed in rosewood, chestnut, laurel, English oak, white oak. Polished bronze is generous distributed throughout. Modernistic sculpture can be found in all public areas including hallways, vestibules, and elevator lobbies. Four passenger elevators serve the tower, where on the eighteenth floor is located a public observatory.

A cold-night-fire and a generation of forward-thinking North Dakotans were responsible for this statehouse. Their courage, and the conviction of some Chicago architects, produced a significant piece of American architecture and one of the country's finest state capitols.

Field Building

Chicago

Graham, Anderson, Probst & White, Chicago

1934

The Field Building is one of a rare breed that can unequivocally be termed mammoth. Conceptually the Field consists of five boxes glued together forming one super-sized skyscraper. Four twenty-three-story corner anchors buttress a massive central slab of forty-four floors. The Field covers a-half city block, has three basements, embraces over one million square feet of office space, and when completed was the Loop's largest office building—by far.

This skyscraper's footprint measures 160 by 350 feet. A five-story podium, marked by black granite supports the "five" towers above. Light wells were "carved" from the mass and, as one might expect, allow vast quantities of sunlight into the office canyons and crowded streets and sidewalks below. Piers of Indiana limestone rise unencumbered from top to bottom and stress verticality as a defining design element. Floors thirty-nine through forty-two are chiseled from the mass and signal the end of the upward sweep. No funny hat, dome, steeple, or unnecessary contrivance is required here; The Field Building is a no-nonsense *modern* structure with a simple flat roof.

The Field Building was constructed as an investment by the Marshall Field Estate. The chosen location was the northeast corner of Adams and LaSalle Streets, a site squarely in the heart of Chicago's financial district. Construction commenced in 1931 and ceased in 1934, the duration clearly within the confines of the Great Depression. The timing was fraught with danger, money men were sometimes bold. Few business consortium's started skyscraper construction after the New York Stock Exchange debacle of October, 1929, rather, almost all skyscrapers completed during the early 1930's were conceived, designed, and were already under construction during the boom years of the late 1920's. The money men were also brave so the office slab rose.

At forty-two floors, 535 feet tall, the Field Building is tall but not as awe-inspiring as in 1934. The Field once wielded a powerful presence in Chicago but today it is towered over by dozens of skyscrapers, skyscrapers that even blot out its image on the skyline. Perhaps its legacy rests *inside* rather than outside, its fame wrapped up not in its height but in its length—a simple sidewalk, a streamline fantasy.



(270) The Field Building's majestic LaSalle Street entrance captivates...subtly. Photo by author.

Connecting the Field Building's two major entrances, one on the west – La Salle Street, and one on the east – Clark Street, is a central corridor, an interior public sidewalk. This connector of streets measures twenty-three feet wide, twenty-five feet high, and stretches 350 feet. It serves as this skyscraper's shopping arcade and links retail, banking, postal, and restaurant services. The Field's elevator lobby, core of the *vertical* transportation system's forty elevators, skirts the center of this grand corridor. Gray terrazzo floors and gray-veined white marble share wall space with rose-hued, book-cut marble panels. Mildly undulating pilasters of white marble recall the fluted columns so plentiful on other nearby financial district buildings. Doorways, windows, mail boxes, signage, and elevator doors, all trimmed with brass and nickel, ooze Art Deco motifs. Overhead telescoping glass chandeliers vie for attention with two polished nickel sky-bridges. These span north-to-south, connect second floor regions of this city-within-a-city, and feature completely mirrored undersides.

Ernest Robert Graham, the major design force behind the Field Building, and whom after the Chicago-based firm was named, designed over two dozen skyscrapers throughout the country. In New York City he is best remembered for contributing to the design of the Flatiron Building (1902) and also for his largest opus there, the Equitable Life Assurance Building (1914). It was with the Equitable, two decades before the Field, that Graham first experimented with an interior sidewalk as it, too, connects streets at this skyscraper's opposite ends (Broadway and Nassau). Chicago's Field Building marks the last of his skyscraper designs, and two years after its completion architect Graham died. The Field Building claims the honor of being the first in Chicago to offer central air condi-

tioning to its tenants; curiously only floors one through four and its two basements were electrically cooled. Additionally, the Field Building boasted a modern *drinking water system* with a drinking fountain in each office, and, perhaps more importantly, the Field was the first office building in the Loop to offer alternating electric current throughout.

A metal wall plaque mounted at the lobby's west end reads:

This section of the Field Building is erected on the site of the Home Insurance Building which structure, designed and built in eighteen hundred and eighty four by the late William LeBaron Jenney, was the first high building to utilize as the basic principle of its design the method known as skeleton construction and, being a primal influence in the acceptance of this principle, was the true father of the skyscraper. 1932

Marine Hospital

Seattle

Bebb and Gould, John Graham, Sr., Seattle

1934



(271) Marine Hospital

This Art Deco tour de force stands sixteen stories ranks as one of America's tallest hospital buildings. Though symmetrical, this hospital's design is both dynamic and expressive. Two eleven-story wings serving as "connective pieces" flank a great, vertically accented central pavilion with strong unbroken vertical piers. Seven-story end elements, influenced more by the International Style, stress the horizontal and serve as powerful foils to the building's central pavilion. In all, this building is a study in volumes, not in over-decorated wall surfaces.

Jackson County Court House

Kansas City

Wight & Wight, Kansas City

Keene and Simpson, Kansas City

Frederick C. Gunn, Kansas City

1934

A major component of Kansas City's Civic Center is the Jackson County Court House. It stands twenty floors, 295 feet tall and is one of the great civic monuments constructed in America during the Great Depression. This impressive Art Deco structure is monumental and handsome. Massing, setbacks and recessed window openings allow shadows to engage the skyscraper's walls in truly artful ways. Even the hundreds of casement windows, when opened, invigorate its stone walls.

Upon completion, the Jackson County Court House cost \$4 million, housed Kansas City's largest jail, and was the city's seventh tallest building. Including the usual court-rooms, private chambers, and public office spaces, the building did originally house 450 jail cells on none other than three of its *upper* floors. Sculptured friezes executed by Charles L. Keck ornament the facades.

The architects, who most responsible for this skyscraper, were: William Drewin Wight (1882-1947) and his brother, Thomas. In 1900, William began his career in the firm of McKim, Mead, & White in New York City. In 1911, William joined his brother, who was already practicing in Kansas City and Wight & Wight was formed.

United States Courthouse

New York City

Cass Gilbert, New York City

1936

Located in New York's vast Civic Center, on Foley Square, is this thirty-seven-story landmark. After three years of construction the building was topped-out at 590 feet and was immediately proclaimed the tallest of *all* federal buildings, a distinction it still holds. This is one of the last neo-classical office buildings erected in New York, Cass Gilbert's last opus, and one of the first skyscrapers erected by the federal government.

Architect Gilbert, perhaps influenced by Boston's United States Customs House (Peabody and Stearns, 1915), developed a parti based upon a strong neo-classical podium from which a telescoping shaft rises. New York's offering also recalls Gilbert's earlier Union Central Life Insurance Building (1913) in Cincinnati. Like these, Manhattan's courthouse shaft is disposed with compelling proportions, drama, and finesse. With its pyramidal top the skyscraper delivers an altogether potent government image.

New York's United States Courthouse is faced with light gray granite. Its base, fronting on Foley Square, features a portico with ten four-story-high unfluted Corinthian columns. Granite urns mark the building's corners at the seventeenth floor, and at the base of the pyramid, granite eagles are perched at the corners. The Courthouse's piece de resistance is of course its summit. The otherwise solemn structure is brought to a visual climax by a golden cap, a pyramid that shelters five attic floors and is topped by a glass lantern. In 1934, while the Courthouse was under its first year of construction, Cass Gilbert died. The architect's son, Cass Gilbert, Jr., completed the project.

Cathedral of Learning

Pittsburgh

Charles Z. Klauder, Philadelphia

1937

Pittsburgh's Cathedral of Learning was one of the last skyscrapers to be constructed prior to World War II. Klauder, a distinguished Philadelphia architect, used no reserve with this building's design and liberally employed Gothic forms to this stone extravaganza. Some in Pittsburgh reasoned that if New York City can possess a "Cathedral of Commerce"⁴¹⁰ then Pittsburgh can lay claim to a "Cathedral of Learning." And so they did, but only after a decade of construction.

The Cathedral of Learning⁴¹¹ is the centerpiece of the University of Pittsburgh⁴¹², its campus covers 132 acres, contains over ninety buildings, and is located two miles northeast of the cluster of skyscrapers that mark Pittsburgh's Golden Triangle. The Cathedral of Learning stands forty-two floors, 535-feet, and remains the landmark its architect intended it to be. Groundbreaking occurred in 1926 and was quickly followed by foundation work, tasks that would eventually sink supports sixty feet into Pittsburgh's soil. The building's exterior skin is composed of some 165,000 blocks of Indiana limestone.

This skyscraper's function, as originally stated by architect Klauder, was multipurpose: it originally housed ninety-one classrooms, multiple lecture halls, Commons Room⁴¹³, the University's library, administrative and faculty offices, scientific laboratories, student and faculty social rooms. Still diverse, it remains the tallest collegiate building in the nation.

Charles Z. Klauder (1872-1938) was indeed an acclaimed architect having earned many honors during his career, including the 1918 Medal of Honor of the Philadelphia Chapter of the AIA, and the Gold Medal of the Architecture League of New York in 1921. Klauder's formal architectural education occurred at the Philadelphia School of Industrial Arts. Further education was gleaned during stints in such architectural firms as T. P. Chandler (entered at age sixteen), Schickel & Ditmars of New York, and Wilson Brothers & Company of Philadelphia, among others. Architect Charles Z. Klauder, and his Philadelphia firm, specialized in the design of collegiate and religious buildings, most of which were undertaken in the eastern United States. Klauder's tallest and most imposing commission was the Cathedral of Learning, a fitting monument to a distinguished career and to America's last neo-Gothicist.

Kansas City Hall

Kansas City

Wight & Wight, Kansas City

1937

Previous to *this* city hall, Kansas City, Missouri politicians gathered inside an earlier civic structure designed by Simeon E. Chamberlain and completed in 1891. This Romanesque-inspired, but confused brick box of gables, finials, arches and turrets outgrew its usefulness, and in 1938 was demolished. In a complete renunciation of earlier styles and forms, the Wight and Wight firm completed the design for this modern manifesto in stone. Here stands a sleek monument on the prairie, a great tower visible for miles, and, after Philadelphia and Los Angeles – the third tallest city hall in America.

Rising twenty-nine floors, 443 feet, the City Hall is the tallest building in a civic center originally planned in 1931. This Art Deco skyscraper is composed of two large masses, a six-story base and a twenty-three-story shaft. Together, the building says much about proportioning and decoration. The facades are composed of Indiana limestone, metal spandrels, and glass. Friezes that encircle the base at the sixth floor level echo those found high on the tower.

As completed, the City Hall cost Kansas City taxpayers \$5 million, and as a grand civic gesture, the City opened the thirtieth floor as a public observation balcony. Since its completion this City Hall has been floodlighted nightly, an impressive beacon on the city's skyline.

Chapter Seven

Skyscrapers and the Small Town

Once upon a time American small towns had no tall buildings. Grain silos, church steeples, and the courthouse belfry were more often than not a town's tallest structures. Other than these, an aunt's attic was about as high as one could hope to occupy, and then only during an unpleasant Saturday clean-out. That aunt's tall white house with wraparound porch was a "memory fixture" like the proverbial town square with its wooden band shell and Civil War cannon. These proliferated and were identified with small town life and served as tangible elements, symbols of contentment and continuity. But other symbols were sought, coveted by business leaders and politicians - mostly. Medium-size cities were sprinkled with tall business buildings called skyscrapers and some small towns were eager to participate. Rumbling locomotives pouring forth steam and sparks delivered architects from other places to sketch planned buildings and show where their shadows were to fall. Facades were explained, and soon contracts were penned, work commenced, and invoices signed. Before long, a new town symbol in the form of a "tall" and fussy building became a reality. And so, Victorian-age small towns everywhere were dotted with one, and possibly even two, skyscrapers. Now tall symbols of sophistication standing seven, nine, or even thirteen stories reigned over aunts' attics everywhere, over the grain silos, church steeples, and the courthouse belfries.

Thornton Wilder gave us the quintessential small town, Grovers Corners, in *Our Town*. The setting was in New Hampshire in 1901, and here there were no skyscrapers, never would be. It was a place where life was slow but no one knew it. The town tended toward provincialism – not surprising – and had its share of gossip with a dusting of jealousy, pride, and shallow competitions. Like most of America's towns the summer was a time for painting picket fences and the baking of pies; memories were of hot days, lemonade, and sling shots. Small town papers reported the goings-on in larger cities and news about tall buildings being constructed in the state capital or "other places" past the county line; these reports prompted some town fathers to encourage the building of taller, more prominent buildings on *their* "Main Streets." Grovers Corners was simply too small to have generated even one skyscraper, but many other towns were not.

Small town skyscrapers were highly visible no matter which "side of the tracks" you happened to see them from; these buildings were tall on the skyline...but lonely. Small towns, some with streets yet unpaved, counted courageous bankers, investors, and fi-

nanciers as special types of citizens – those often referred to as “leading.” These were the men who *built* the skyscrapers and accepted plaudits for them. Small town skyscrapers were happy buildings, they welled-up pride in the townsfolk and were sources of one-upmanship. The new tall structures were viewed as modern additions to the sleepy townscapes and affirmations that a town, any town, was economically viable and the community vigorous; the future was guaranteed by the exploration, indeed the securing and occupation, of a lofty shaft of air above the town. Once loftiness was accomplished and the terra firma left far below, the small town would never be quite the same.

The Griswold Block was constructed in 1897 in the Massachusetts town of Housatonic. It was imposing and it was put together with wood and iron, some glass, and a lot of fancy-sawn woodwork. A brick chimney topped it off at perhaps forty feet high. The first floor was devoted to retailing, the upper stories to renters - offices, apartments, or both. Hitching posts were still the norm while electric wires overhead promised a better future. The Griswold Block was most probably one of Housatonic’s tallest business structures. This is the building that everyone in town knew, the building they passed regularly and admired it when it was new and for a short time thereafter. It was not a skyscraper.

The Sheridan Hotel was constructed about 1895 in Cass City, Michigan. It was made of brick, stone, and iron with some glass. Its “witch’s cap” was its most distinctive feature. All citizens of Cass City knew this hotel - it was *their* landmark, a symbol of gentility if only for a moment. It was not a skyscraper.



(272) Griswold Block



(273) Sheridan Hotel

The Griswold Block and the Sheridan Hotel were precursors and contemporaries of the following skyscrapers. It is from structures like these, Main Street business buildings with multiple stories, that Boone, Kalamazoo, Youngstown and Fargo would come to erect modern skyscrapers. The Griswold Block stretched upward by the addition of ten stories would rival the skyscrapers of Boston or Philadelphia. It is simply a matter of scale; the

Sheridan Hotel with another ten floors squeezed in the middle would seamlessly blend into the Cleveland or Cincinnati skyline.

In 1885, reporter Sally Wilcox informed her readers about the construction of a new bank building in Winfield, Ohio. This "small town" event suggests much enthusiasm and pride on the part of the reporter and excitement which no doubt was shared by the townsfolk. The building would rise just three stories, gigantic in Sally's mind and soul.

The excavation for the new Farmer's Bank block is progressing right along. Paris & Harrod are throwing the dirt. Architect Ritchie gave us a glimpse of this block this morning. It will be the champion block of the city. The first seventy-five feet will be three stories, with Mansard roof and crested cornice. The corner entrance is artistic. The stairway entrance is central, from Main. The block is metropolitan in everything, with beautiful interior and exterior finish. The construction contract will be let next week.

The Farmer's Bank building, on the corner of Main Street and 9th Avenue, will be by far the best building in this part of the State. It will be built of the gray stone, with blue stone trimmings, and will have a galvanized iron cornice, crestings, and dormer windows, with a slate roof, mansard and gothic front on the third floor part of the building. The building will be 50 x 115 feet, of which the front 50 x 75 feet will be three stories...This building will be the "Office Block" of the city, and will contain thirteen suites of the best lighted and ventilated offices in the city. The building will cost \$20,000. A fine drawing of the building will be completed soon and will show what it will be when completed.⁴¹⁴

Some of the following skyscrapers, built over six decades in American towns, were architectural trailblazers in their town-settings, places replete with white houses and Main Street buildings with rusty water towers. With aging towns as backdrop the new skyscrapers, one would say, had no aesthetic rivals; they were "metropolitan in everything." The following are the buildings of long-forgotten businessmen and their hand-picked architects, their investors, their lawyers, and the mop crews with clanging tin pails.

Tall Ones in Short Places: Sketches



(274) Sleepy streets and quiet times were the norm for some places.

The main street of every small town looked like this, connected business blocks standing not more than four stories. This 1908 glimpse of Sun Prairie, Wisconsin, shows no skyscrapers.



(275) Clevar Block, Iowa. In 1905, this was home to diverse businesses, such as the Rugby Coal Company, the Victor Acetylene & Mfg. Co., and a watch repair shop, among others.

This was the quintessential business building of the small town, a three-story brick block with various retail establishments on the first floor with office or hotel room walk-ups spaces on the second and third. *Thinking tall* did not overcome the economics on *thinking small* and three stories was the limit for most small towns. For some places that would change, but for most thirty feet was tops.



(276) Hartford, Wisconsin, almost.



(277) Clintonville, Wisconsin, was a town with high hopes.

It was mighty important for some small towns to shrug off their images as "backwater," as locales that offered little in the way of basics or amusements. Those items commonplace in many big cities were simply absent in many rural areas or towns where isolation was both geographic and cultural. Eventually electricity, the telephone, indoor plumbing, the automobile, and the nickelodeon would arrive, but they would arrive not soon enough for certain pranksters. The view of Hartford, Wisconsin, captured about 1910, illustrates how a skilled photographer can include a *skyscraper* in this small town scene. This spoof centers upon the inclusion of Chicago's Railway Exchange Building into the sleepy hamlet. The seventeen-story skyscraper, after a drastic thinning, was inserted in the darkroom no doubt to the delight of Hartford civic boosters.

Clintonville, Wisconsin, miraculously displays a competent version of Chicago's Reliance Building in the heart of its downtown. The telephone poles are real but then so are the muddy streets. Now, in this 1908 view, Clintonville has a fourteen-story skyscraper, just like Milwaukee. A skyscraper can be a potent political or social tool no matter if it ever existed.



(278) Elyria Block



(279) After the tragedy only a few walls remained.

The City of Elyria, Ohio, was founded in 1817 by a handful of hearty inhabitants some twenty-five miles west of Cleveland. When the Elyria Block was completed in 1890, the city boasted 5,611 citizens who were served by two banks, two newspapers, and seven churches. Its downtown was accessed by electric trolleys, horses-drawn wagons, buggies, and wood hand trucks; automobiles would appear there soon. Its most imposing building, certainly the pride of Elyria, was the five-story Romanesque Revival Elyria Block. The city's first skyscraper was stone and brick-faced and possessed a modern metal skeleton-either iron or steel or both. Upon completion it was fully occupied with a diverse host of businesses: its tenant roster included the Republic Oil Company, the Elyria Business College, insurance agents, attorneys, a mining investment firm, real estate agents, an osteopath, a bank, a grocery, and a "ladies tailor." For all intents and purposes *this was Elyria*, an all-encompassing skyscraper in the heart of town. Tragically, on the evening of April 14, 1909, this city symbol and social center was destroyed by fire. There was no definitive cause though rumors of a smoldering cigar or faulty wiring were cited as possibilities.

Kearney, Nebraska, was a tiny place, a onetime crossroads for railroad developers. It was declared a town in 1871 and by 1873 it claimed to have 245 residents. Only twenty years after its founding, Kearney had its own opera house and, comparatively, tall office building-a skyscraper by Kearney standards. The Kearney Opera House Building was constructed in 1891 when the, now city, had a population that topped 10,000. Its auditorium was wrapped by offices and stores and was the principal "tenant" in the city's largest and tallest office building. The Opera House was of a Romanesque Revival design and was described as "the most imposing structure in Nebraska outside Lincoln and Omaha." It was important, if not vital, for a city's image to have a building such as this. Kearney residents were aware of that and this structure was the result.

The Kearney Opera House Building stood five floors, took exactly one year to complete, and was constructed at a cost of \$140,000. Its exterior was of Rawlings gray stone, quarried near Rawlings, Wyoming. The building's L-shaped footprint measured seventy-five by 130 feet and its walls were almost two feet thick. First and second floor corner windows, designed to provide views into the retail spaces, were curved and framed with iron columns. Its main floor, balcony, gallery and boxes could accommodate 1,231 for operas, concerts, theater, or vaudeville. Despite its onetime prominence and popularity the building fell into neglect and disuse, and tragically, it was demolished in 1954.



(280) Kearney Opera House



(281) City Bank Building

When the City Bank Building was completed in 1891, Wheeling, West Virginia, was the state's largest city with a population of 34,522. While not exactly a rural hamlet, Wheeling was more "small town" than "big city." This stone-faced building was a very important feature in Wheeling; at six stories, 125 feet, the City Bank was the state's tallest building. Its architect was Edward Bates Franzheim (b.1866) a native son who was described as "probably the most successful and best known architect in the state of West Virginia." He was educated in Boston but returned to Wheeling to practice there in 1890. The City Bank Building boasted twenty-six offices, a first floor banking room, lavatories on every floor, marble wainscoting, and "a rapid Otis hydraulic elevator." This skyscraper, constructed for \$80,000, was lighted by electricity and heated by steam.



(282) Michigan Trust Company Building

The Michigan Trust Company was formed in 1889 in Grand Rapids, and within only two years sought to construct a ten-story skyscraper as its headquarters. Inspired by the Romanesque architecture of Spain and France, the Chicagoan Solon Spencer Beman selected that style to clothe the tallest office building in the city. Red sandstone, found at its two-story base, and red brick and terra-cotta placed above, were the chosen facing materials. Steel and iron held the building up in the manner of cage construction. The Michigan Trust Building of 1892 was praised for its handsome proportions and its overall elegant composition.

The Illinois National Bank was chartered in August 1886, and by 1894, the Bank completed the first skyscraper in Springfield, Illinois. Originally costing \$100,000, this six story building was described as the first fireproof business structure in the city; its promoters boasted that it possessed "every modern convenience." The Illinois National Bank's banking room occupied the first floor, and rising above, were five floors devoted to banking and private office concerns. Steel lined vaults and over one thousand safe deposit boxes were provided in the basement. The building was served by one passenger elevator, it was heated by steam, and was lighted by electricity. The architects, responsible for this "quaint" skyscraper, were Roger C. Bullard (died 1948) and Clark W. Bullard, both of Springfield. In 1951, bank officials decided to raze the building in favor of building a "more modern structure," and after only two months toil, this 19th century tower was erased from downtown Springfield.



(283) Illinois National Bank



(284) Lancaster's Woolworth Building

This Lancaster, Pennsylvania, building was the original Woolworth Building, having been completed in 1899, 14 years before its more famous cousin in Lower Manhattan. It was located at Twenty-One North Queen Street, rose five floors, and was near to where the very first Woolworth's 5 & 10 stood. This first "dime store" was opened June 21, 1879, only twenty years before the office structure.

Perhaps one of the shortest buildings considered a skyscraper, this was, in fact, a multi-story office building complete with passenger elevators and a metal skeleton. More importantly, it was a building that foresaw the possibilities of going much higher, yet responded to the Woolworth company's needs, the needs of an expanding business in a small town. Wrapped with stone, brick, and terra-cotta, the building also boasted large "oversized" windows.

Once Lancaster's tallest building, the Woolworth was designed by the New York City firm of Ditmar & Scheckels in an Italian Renaissance manner. The most distinctive architectural feature of the Woolworth was its two Baroque-inspired corner towers. In between these was a lush rooftop garden, popular at the turn of the century, especially during warm summer evenings. This venue opened in 1901, seated 715 people, and was a huge success. Tragically, the Woolworth Building was demolished in 1949, and ironically, in its place was built a Woolworth 5 & 10.

Birmingham, Alabama was founded in 1871, a relative late-starter by American standards. In 1900 Birmingham's population was only 38,415, but by 1910 it had grown to

132,685. During this decade there was a smattering of *relatively* tall business buildings there but few over six floors. In 1903 the First National Bank Building was completed, and at ten floors, 130 feet tall, it was the town's tallest skyscraper. This steel manufacturing center, recognized as the "world's largest producer of pig iron and pipe," claimed its first real skyscraper only *thirty-two years after its founding*; Birmingham yearned for, and acquired for itself, that symbol of modernity, progress, and business acumen that the "skyscraper" provided in general and the First National Bank Building offered in particular. And besides, this skyscraper was new, modern, with crisp edges and no frills. Its facades were simple with simple geometries. Here stood a glassy, modern design despite the discordant horse-drawn buggies out front. The First National Bank Building was Birmingham's tallest until 1909 when the neo-classical Empire Building (J.E.R. Carpenter and William Leslie Welton) was topped-out at sixteen floors, 274 feet. After a century the First National Bank Building, renamed the Frank Nelson Building, remains a delightful fixture in downtown Birmingham.



(285) First National Bank Building in Birmingham.



(286) Wick Building

In 1906, Youngstown, Ohio, saw the rise of its first skyscraper, the 13-story, 184-foot tall Wick Building. A Youngstown native by the name of George Dennick Wick (1854-1912) was a leading iron and steel manufacturer and the sponsor of this skyscraper. The Wick Building, designed in the Renaissance Revival style by the office of Daniel Burnham in Chicago, had a red brick and terra-cotta exterior. The Wick Building suffered some "remodeling" throughout the years but has managed to maintain its architectural integrity. Returning from a European vacation, George, his wife, and daughter had the misfortune to choose the ocean liner *RMS Titanic* as conveyance. Wife and daughter survived; the body of George Dennick Wick was never found. The *Cleveland Plain Dealer*, on April 20, 1912, reported: "The flag on the Wick Building...was placed at half mast yesterday afternoon, when it was established beyond doubt that Col. Wick had not been rescued."

In 1907 the Knoxville Banking & Trust Company erected a skyscraper to serve as the company's headquarters. Knoxville, Tennessee's newest and tallest building stood ten floors, 166 feet tall, and was designed by the Chicago architectural firm of Graven & Mayer. Today, the Knoxville Banking & Trust Building is known as the Burwell Building; it currently is the city's fifth tallest. In this rare photo it appears a donkey is being lifted by a derrick to the upper regions of the skyscraper during its construction. A contemporary caption read: Maud up in the air, ten stories - ten thousand people view the sight. No further explanation can be offered for such a bizarre event, nor can one be offered for naming a donkey Maud.



Maud up in the air, ten stories—ten thousand people view the sight
MEENE & READ, P'TL, 1908

(287) Knoxville Banking & Trust Building



(288) First National Bank Building, Boone, Iowa

Grain elevators, giant concrete silos referred to as "skyscrapers of rural America" are plentiful throughout Iowa. Not very plentiful, there, are small town "skyscrapers" for people, not corn. Boone, Iowa, is the home to this proper little skyscraper, the First National Bank Building. This nine-story skyscraper was completed in 1916 in the Renaissance Revival style and was the work of the Des Moines firm of Proudfoot, Bird & Rawson with architects Woodburn and Son.

The Security Savings Bank of Cedar Rapids, Iowa, was only nineteen years old when it called this eight-story skyscraper home in 1908. Its headquarters was the work of the Cedar Rapids-based architectural firm of Josselyn & Taylor. Henry S. Josselyn (1845-1934) and Eugene Hartwell Taylor (1855-1924), both trained at the Massachusetts Institute of Technology, formed a partnership in 1879 which lasted until Taylor's death. Their

designs were more often rooted in the historical styles, the Romanesque and of the more flamboyant High Victorian modes; The Agriculture Hall (1891) located at the State Agriculture College, and the Iowa State Building (1892) designed for Chicago's 1893 Columbian World's Exposition exemplified their tastes for the more spirited. The antithesis of these is the Security Savings Bank, a structure arguably influenced, at least in part, by the work of Louis Sullivan by way of massing and the disposition of the façade's elements. Josselyn and Taylor were undoubtedly aware of Sullivan's contribution to architecture in the form of the tall office building. With the Security Savings Bank the Iowa firm adopted a more sober approach with a subtle adherence to the base-shaft-capitol program of vertical division. The red brick skyscraper has a centrally placed main entrance with large first floor windows betraying the public banking or retail space above which rises uniform office floors. Stringcourses simultaneously separate and unify the composition ultimately defining the tripartite system. A rhythmic window pattern (a,b,a,b,a) organizes the façade into an altogether rational and artistic composition. A whimsical spiral fire escape adds interest and becomes an integral sculptural element on an otherwise severe side façade.



(289) Security Savings Bank



(290) Downtown Duluth boasts the Alworth, the Torrey, and the Lonsdale Buildings.

Duluth, Minnesota, has an ensemble of skyscrapers few small cities can equal. The landmark Alworth Building was completed in 1910. It was designed by the D.H. Burnham & Company of Chicago for Duluth industrialist Marshall H. Alworth (1846-1931), owner of vast tracts of land from which lumber and iron ore were extracted – eventually producing wood flooring and steel girders, the very stuff of America's skyscrapers. Construction began on the skyscraper on September 12, 1909 on what was to become *the tallest*

building in the state until 1914; upon completion the Allworth Building proudly stood at sixteen floors, 247 feet high. The skyscraper's overall massing, placement of decorative detailing, top floor circular windows, and strong verticality evidenced by unbroken piers echoes the work of Louis Sullivan's Guaranty Building (Buffalo, 1895). The brick and terra-cotta-faced skyscraper contained 275 offices, cost a half-million dollars, and prompted the Duluth News Tribune to proclaim the Allworth "a cosmopolitan office building, one that dwarfs the Tower of Babel to a mere cottage in comparison." The Allworth Building still stands.

The Torrey Building stands ten floors, 115 feet tall and was billed as Duluth's first skyscraper. It was designed by the firm of Traphagen & Fitzpatrick of Duluth and completed in 1892. The shortest of the three, but by no means the least important, is the Lonsdale Building, a notable brick and terra-cotta structure of eight floors. The still-standing Lonsdale was the work of Palmer, Hall and Hunt, Architects and was completed in 1895. The Jefferson Building was constructed in 1916 in Peoria, Illinois. This twelve-story office skyscraper still stands in downtown Peoria and remains one of the city's largest and tallest buildings.



(291) Peoria's Jefferson Building



(292) Amicable Life Insurance Building

The Amicable Life Insurance Company erected this skyscraper in downtown Waco, Texas, in 1911. The Amicable Building was designed in the Renaissance Revival style by the architectural firm of Sanguinet and Staats of Fort Worth. Then the city's tallest, the Amicable Building officially stood at twenty-one floors, 282 feet high. It contained 266 offices, 733 windows, 1,223 doors, 1,860 tons of steel, 115 tons of iron, and 250,000 rivets; its weight equaled 20,043 tons (dead load).

Businessman and West Virginia politician Nathan Goff, Jr. (1842-1920) sponsored the construction of this prominent nine-story office building in Clarksburg c.1915. Architect Frank P. Milburn was responsible for its design – a competent and personal interpretation of the Beaux Arts.



(293) Goff Building



(294) State Trust Building

The State Trust Building of Moline, Illinois, was that town's premiere office skyscraper when finished in c.1915. It was home to the Moline State Trust & Savings Bank which occupied the first floor as its public banking hall. Other departments were located on floors two through eight with the offices of other business firms. Danville, Illinois' first skyscraper was the twelve-story First National Bank of Danville. It was erected in 1918 by Danville's first and oldest bank and it was designed by the Chicago architect William Mundie (1863-1939) in the Renaissance Revival style. The bank relocated from its namesake skyscraper in 1955 and the building is now known as the Breese Tower.



(295) Danville, Illinois' First National Bank



(296) Peoria Life Insurance Building

Peoria, Illinois, founded in 1845 on the Illinois River, is an industrial town known historically as one of the country's largest manufacturers of liquor. In 1920, with a population of some 76,000, it witnessed the completion of the Peoria Life Insurance Building located only four blocks from the city's riverfront. This skyscraper immediately became the city's tallest at seventeen stories, 256 feet, a title it held until 1984. The firm responsible for designing this structure was Hewitt and Emerson, founded in Peoria by Herbert Hewitt (1871-1944) and Frank Emerson in 1909. They were responsible for over 400 buildings, this, the tallest, executed in the Renaissance Revival style featuring a two-story main entrance, Corinthian pilasters, and a central tower topped by a pyramidal cap and cylindrical lantern. The tower is lighted nightly accenting its profile on the city's skyline.

The Industrial Savings Bank Building was completed in 1923 and immediately became one of the most prominent structures in Flint, Michigan. It stood twelve stories and was designed by the firm of Davis, McGrath and Kiesling with the Realty Construction Company of Flint. This skyscraper is currently known as the Metropolitan Building.



(297) Industrial Savings Bank Building



(298) Odd Fellows Building

South Bend, Indiana, was the home to this skyscraper erected for the International Order of Odd Fellows (I.O.O.F.), a fraternal organization. The Odd Fellows Building dated from 1928, had ten floors, and due to its height of 115 feet, was visible throughout town. This "modern Gothic" tower was demolished in 1986.



(299) Bank of Kalamazoo

The Bank of Kalamazoo Building is an Art Deco landmark in that Michigan city. This fifteen-story skyscraper was designed by the Chicago firm of Weary & Alford and was completed in 1929. Still standing, the building is now known as the American National Bank Building.

The Farmers Bank Building in Mansfield, Ohio, was that town's most celebrated skyscraper when completed in 1929. The Bank, organized in 1874, erected this twelve-story, 157-foot tall building as its headquarters. Exterior walls were carefully finished with creamy Indiana limestone and "Farmers Bank Building" was prominently carved above the skyscraper's main, arched, entrance; perched above was a large carved eagle, fanciful swags, and foliate designs. Though some remodeling has occurred to this Art Deco tower, all of the luscious carving has remained. Mansfield's Farmers Bank Building was renamed the Bank One Building.



(300) Farmers Bank Building



(301) Alamo National Bank

The Alamo National Bank of San Antonio, now known as the Bank One Building, is twenty-four stories tall, 278 feet high. This Texas noteworthy, designed by architects Coughlin & Ayres with James Wahrenberger was completed in 1929 and remains a fine example of Art Deco architecture. The Black Building, completed in 1931 in downtown Fargo, North Dakota, was the tallest building in the state until the nineteen-story state Capital was completed in 1934. Businessman George M. Black (1882-1972) commissioned the Minneapolis architectural firm of Land, Raugland & Lewis to design Fargo's first eight-story skyscraper. Its cornerstone was laid on November 17, 1930 and before completion some 250 tons of steel and 4,000 tons of concrete would be placed. The building's first two floors were targeted for retailing while the upper six were for office use; total square footage totaled 100,000.

Middletown, Ohio, was the home to this stunning c.1931 Art Deco skyscraper, the Middletown Building. Sponsored by the Middletown Building and Deposit Association, it stands eight stories and is faced with smooth stone and lavish Art Deco carvings.



(302) Black Building



(303) Middletown Building

When completed the Larson Building was the tallest in Yakima, Washington. Yakima businessman A.E. Larson (1862-1934) ordered the construction of this skyscraper, an office building standing eleven floors, 188 feet tall. The Larson Building cost \$750,000 and opened to the public on September 26, 1931. The skyscraper contained 225 offices, featured 365 windows, and boasted an interior and an exterior of lavish Art Deco design.



(303) Larson Building of Yakima, Washington

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America's Ten Loftiest Skyscrapers in 1875

Rank	Building	Location	Floors	Feet	Completed
1	New York Tribune	New York City	9	260	1875
2	New York Mutual Life	Boston	7	234	1875
3	Western Union Telegraph	New York City	10	230	1875
4	New York Post Office	New York City	7	195	1875
5	Syracuse Savings Bank	Syracuse	8	170	1875
6	Mutual Life Insurance	New York City	8	157	1871
7	Bennett	New York City	11	154	1873
8	Broadway Central Hotel	New York City	9	149	1870
9	New York Evening Post	New York City	10	140	1875
10	Jayne	Philadelphia	10	130	1850
10	Equitable Life Assurance	New York City	7	130	1870

...in 1885

1	Chicago Board of Trade	Chicago	9	322	1885
2	New York Tribune	New York City	9	260	1875
3	Washington	New York City	13	258	1884
4	New York Mutual Life	Boston	7	234	1875
5	Western Union Telegraph	New York City	10	230	1875
6	Pullman Office Tower	Chicago	13	195	1880
6	Potter	New York City	11	195	1883
6	New York Post Office	New York City	7	195	1875
7	JB Mallers	Chicago	12	175	1885
8	Syracuse Savings Bank	Syracuse	8	170	1875
9	Dearborn Street Station	Chicago	8	166	1885
10	Mutual Life Insurance	New York City	8	157	1871

...and in 1895

1	Philadelphia City Hall	Philadelphia	9	548	1894
2	Milwaukee City Hall	Milwaukee	9	350	1895
3	Manhattan Life Insurance	New York City	19	348	1894
4	Chicago Board of Trade	Chicago	9	322	1885
5	American Surety	New York City	21	312	1894
6	World	New York City	23	309	1890
7	Madison Square Garden	New York City	16	304	1891
8	Masonic Temple	Chicago	22	300	1892
9	Auditorium	Chicago	20	270	1889
10	Broad Street Station	Philadelphia	13	268	1894

America's Loftiest Skyscrapers in 1900 . . . Over 300 Feet

Rank	Building	Location	Floors	Feet	Completed
1	Philadelphia City Hall	Philadelphia	9	548	1894
2	Montgomery Ward	Chicago	25	394	1900
3	Park Row	New York City	29	382	1899
4	Milwaukee City Hall	Milwaukee	9	350	1895
5	Manhattan Life Insurance	New York City	17	348	1893
6	Federal Post Office	Washington D.C.	16	315	1899
7	St. Paul	New York City	26	313	1899
8	American Surety	New York City	21	312	1894
9	World	New York City	16	309	1890
10	American Tract	New York City	21	306	1896
11	Madison Square Garden Tower	New York City	16	304	1891
11	Commercial Cable	New York City	21	304	1897
11	Empire	New York City	20	304	1898
12	Masonic Temple	Chicago	22	300	1892

...and in 2000....Over 900 Feet

1	Sears Tower	Chicago	110	1454	1974
2	One World Trade Center	New York City	110	1368	1972
3	Two World Trade Center	New York City	110	1362	1973
4	Empire State	New York City	102	1250	1931
5	AON Center	Chicago	83	1136	1973
6	John Hancock Center	Chicago	100	1127	1969
7	Chrysler	New York City	77	1046	1930
8	Bank of America Plaza	Atlanta	55	1023	1992
9	Library Tower	Los Angeles	73	1018	1990
10	Chase Tower	Houston	75	1002	1982
11	Two Prudential Plaza	Chicago	64	995	1990
12	Wells Fargo Plaza	Houston	71	972	1983
13	311 South Wacker Drive	Chicago	65	961	1990
14	American International	New York City	67	952	1932

Skyscrapers Ranked Tallest....

America's Highest Buildings...*the Record Holders...* Since 1850

Building	Location	Floors	Feet	Completed
Jayne	Philadelphia	10	130	1850
Mutual Life Insurance	New York City	8	157	1865
Western Union Telegraph	New York City	10	230	2/1/1875
New York Tribune	New York City	9	260	4/10/1875
Chicago Board of Trade	Chicago	9	322	5/1/1885
Manhattan Life Insurance	New York City	19	348	5/1/1894
Philadelphia City Hall	Philadelphia	9	548	11/30/1894

Singer	New York City	47	612	5/1/1908
Metropolitan Life	New York City	50	700	12/9/1909
Woolworth	New York City	55	750	4/24/1913
Chrysler	New York City	77	1046	4/16/1930
Empire State	New York City	102	1250	5/1/1931
One World Trade Center	New York City	110	1368	4/4/1973
Sears Tower	Chicago	110	1454	5/3/1973

Nineteenth Century Skyscrapers

The skyscraper is about people; it is an object...but it is a *place* first. The skyscraper was built by hand for people who were filled with aspirations, bolted by the iron workers and protected by the secrets of the steno girls. Listen closely, perhaps one can still hear the voices spoken over a century ago-words built of strange dialects, orders pushed through cigar-clinched teeth. Still resonating are the rapid tats of typewriter keys, the buzz of the intercom, the hiss of radiators and the tapping of pen nibs on ink wells. Emotions and rituals remain. People too. Listen.

Prominent Skyscrapers of the Nineteenth Century

Building Name	Location	Architect / Firm	Floors	Feet	Year
141-147 Fifth Avenue	New York	Maynicke & Ficken	12		1899
170 Fifth Avenue	New York	Robert Maynicke	14		1898
320-22 South Franklin	Chicago	Holabird & Roche	10		1898
325 West Ohio	Chicago	S.V. Shipman	7		1896
503-511 Broadway	New York	John B. Snook	6		1879
67 Wall Street	New York	Detlaff Lienau	7		1881
715-727 Broadway	New York	Robert Maynicke	12		1894
813 Park Avenue	New York		11		1899
84 Broadway	New York		11	146	1899
900 Broadway	New York	McKim, Mead, & White	10		1886
92-96 Bleeker Street	New York	Alfred Zuker	10		1890
A.J. Stone	Chicago	Alfred Smith	9		1891
Adams Express	Chicago	George H. Edbrooke	11		1886
Aldrich Court	New York	Youngs & Cable	9		1886
Am. Merch. Union Express	Chicago	Richardson	6		1873
American Express	Chicago	Richardson, Gambrill, Wright	6		1873
American Life	Philadelphia	Thomas P. Lonsdale	11		1888
American National Bank	Kansas City	John Wellborn Root	7		1888
American Surety	New York	Bruce Price	21	312	1894
American Tract Society	New York	Robert H. Robertson	21	306	1896
Ames	Boston	Shepley, Rutan, & Coolidge	14	188	1889
Andrews	Chicago	Burnham & Root	7		1891
Apparel	Chicago	Alfred S. Alschuler	7		1894
Argyle Apartments	Chicago	John Wellborn Root	7		1887
Ashland Block (first)	Chicago	Frederick & Bauman	6		1872

Ashland Block (second)	Chicago	Burnham & Root	16	200	1892
Association	Chicago	Jenney & Mundie	16		1893
Astor	New York	Henry J. Hardenbergh	8		1886
Atwood	Chicago	Holabird & Roche	10		1896
Auditorium	Chicago	Adler & Sullivan	20	270	1889
Baily	Chicago	Holabird & Roche	10		1898
Baltimore & Ohio Railroad	Baltimore	E. F. Baldwin	7		1882
Banigan	Providence	Norcross Builders	10		1896
Bank of America	New York	Clinton & Russell	9		1889
Bank of Commerce	New York	Rowe & Baker	20	270	1897
Bank of Minneapolis	Minneapolis	Hodgson & Son	7		1887
Barrett House Hotel	New York		8		1883
Baxter Court	Nashville	Hugh C. Thompson	7		1887
Bennett	New York	Arthur D. Gilman	11	154	1873
Berkshires Apartments	New York	Carl Pfeiffer	8		1883
Betz	Philadelphia	Will H. Decker	13		1891
Bordeaux Hotel	Chicago	Baumann & Cady	7		1891
Borden Block	Chicago	Dankmar Adler	6		1880
Boreel	New York	Stephen D. Hatch	8		1879
Boston Block	Minneapolis	Leroy S. Buffington	7		1886
Boston Block	Denver	Andrews, Jacques & Rantoul	9		1889
Bourne	New York	Ernest Flagg	14		1899
Bowling Green	New York	Audsley Brothers	19	272	1897
Boyce	Chicago	Henry Ives Cobb	12		1892
Bradbury	Los Angeles	George H. Wyman	5		1893
Brewster Apartments	Chicago	R.H. Turnock	9		1893
Broad Street Station	Philadelphia	Frank Furness	13	268	1894
Broadway Central Hotel	New York	Henry Engelbert	9	149	1870
Broadway Chambers	New York	Cass Gilbert	18		1899
Brooklyn Eagle	New York	Ralph E. Leff	10		1892
Brooklyn Real Estate Exch.	Brooklyn	George H. Edbrooke	10		1890
Brown Palace Hotel	Denver	Frank E. Edbrooke	9		1892
Buckingham Hotel	New York	William Field	7		1876
Bucklen	Chicago	Oscar Cobb	6		1884
Burlington & Quincy Railroad	Chicago	John Wellborn Root	6		1883
Button Block	Milwaukee	Crane & Barkhausen	7	125	1892
Cable	New York	McKim, Mead, & White	8		1894
Cable	Chicago	Holabird & Roche	10	140	1899
Cairo Apartments	Washington D.C.		12		1895

California	Denver	Frank E. Edbrooke	6		1892
Call	San Francisco	Reid Brothers	16	315	1896
Calumet	Chicago	Burnham & Root	9		1884
Campau Block	Detroit	Smith & Brown	6		1883
Carnegie	Pittsburgh	Longfellow, Alden, & Harlow	18		1895
Caxton	Chicago	Holabird & Roche	12	150	1890
Central Bank	New York	John T. Williams	15		1897
Central Music Hall	Chicago	Dankmar Adler	6	150	1879
Central Park Apartments	New York	Hubert, Pirsson & Co.	9		1883
Chamber of Commerce	Cincinnati	Henry Hobson Richardson	8		1888
Chamber of Commerce	Chicago	Baumann and Huehl	13	190	1889
Chamber of Commerce	Detroit	Spier & Rohns	12		1895
Champlain	Chicago	Holabird & Roche	15	189	1894
Chanler	New York	McKim, Mead, & White	10		1899
Chattanooga Times	Chattanooga	De Lemos & Cordes	8		1892
Chelsea Hotel	New York	Hubert, Pirsson & Co.	15		1884
Chemical	St. Louis	Henry Ives Cobb	16		1896
Chemical Bank	Chicago	Burnham & Root	9		1894
Chesebrough	New York	Clinton & Russell	15	161	1899
Chicago Board of Trade	Chicago	William W. Boyington	9	322	1885
Chicago Opera House	Chicago	Cobb & Frost	10		1885
Chicago Stock Exchange	Chicago	Adler & Sullivan	13	173	1894
Chronicle	San Francisco	John Wellborn Root	10	208	1890
Cincinnati City Hall	Cincinnati	Samuel Hannaford	8	253	1893
Clinton Hall	New York	G. E. Harvey	7		1890
Club	Denver	Frank E. Edbrooke	7		1892
Coal & Iron Exchange	New York	Richard Morris Hunt	8	155	1876
Coffee Exchange	New York	R. W. Gibson	9		1894
Cohnfeld	New York	Alfred Zuker	10		1885
Columbia	New York	Youngs & Cable	13	156	1890
Columbia	Louisville	Curtin and Campbell	10		1890
Columbus Memorial	Chicago	William W. Boyington	14	251	1893
Commerce	Chicago	Burnham & Root	8		1886
Commerce Bank	St. Louis	Henry Issacs	8		1889
Commercial	St. Louis	Willoughby J. Edbrooke	8		1889
Commercial Cable	New York	Harding & Gooch	21	304	1897
Como	Chicago	John M. Van Osdel	9		1887
Con. Stock & Petrol. Exchange	New York	Edward D. Lindsey	8		1888
Conduit	New York	Louis Sullivan	12		1898

Conestoga	Pittsburgh	Longfellow, Alden & Harlow	7		1892
Congress Hotel	Chicago	Clinton J. Warren	13	180	1893
Constable	New York	W. Schickel & Co.	12		1893
Continental Bank	Memphis	Jones, Hain, & Kirby	12		1895
Continental Fire Insurance	New York	Charles W. Clinton	13		1893
Continental Hotel	Philadelphia	John McArthur, Jr.	6		1860
Continental Insurance	New York	Clinton & Russell	14	215	1897
Cooper	Denver	Frank E. Edbrooke	8		1895
Corbin	New York	Francis H. Kimball	9		1889
Corn Exchange Bank	New York	Robert H. Robertson	11	158	1892
Cotton Exchange	New York	George B. Post	8		1883
Counselman	Chicago	Burnham & Root	10		1884
Criminal Courts	Chicago	Otto H. Matz	7		1892
Cushman	New York	C. P. H. Gilbert	12		1897
Cuyahoga	Cleveland	Burnham & Root	8		1893
Dakota Apartments	New York	Henry J. Hardenbergh	9		1882
De Vinne Press	New York	Babb, Cooke & Willard	7		1886
Dearborn Street Station	Chicago	Cyrus L.W. Eidlitz	8	166	1885
Dekum	Portland	McCaw and Martin	8		1892
Del., Lackawanna & Western	New York	L. C. Holden	10		1891
Delaware	Chicago	Wheelock & Thomas	8		1874
Dexter	Chicago	Burnham & Root	8	140	1883
Domestic Sewing Machine	New York	Griffith Thomas	7	110	1873
Donohue	Chicago	Julius Speyer	8		1883
Downing	New York		16		1894
Drake-Farwell	Chicago	John M. Van Osdel	7		1870
Drexel	Philadelphia	Wilson Bros. & Co.	10		1888
Dun	Buffalo	Green & Wicks	10		1895
Dun	New York	Harding & Gooch	15	223	1899
Duncan	Nashville	George W. Thompson	12		1889
Duplicator	Chicago		7		1886
Edison	New York	Carrere & Hastings	9		1891
Ellicott Square	Buffalo	D. H. Burnham & Co.	10		1896
Ellwanger and Barry	Rochester, N.Y.	Warner & Brocket	8		1888
Elwood	Rochester, N.Y.	James G. Cutler	7		1879
Empire	New York	Kimball & Thompson	20	304	1898
Endicott	St. Paul	Cass Gilbert	6		1891
Enterprise	Chicago	Howard Van Doren Shaw	10		1895
Equitable	Denver	Andrews, Jacques and Rantoul	9		1890

Equitable	Atlanta	John Wellborn Root	8	120	1892
Equitable	Baltimore	Chas. Carson & Jos. Sperry	8		1894
Equitable Life Assurance	New York	Gilman, Kendall, & Post	7	130	1870
Erie County Savings Bank	Buffalo	George B. Post	10		1893
Ernest & Cramer	Denver	Frank E. Edbrooke	8		1890
Essex	Denver	Frank E. Edbrooke	7		1887
Exchange Court	New York	Clinton & Russell	12	160	1898
Fagin	St. Louis	C. P. Clark	10		1888
Fahys	New York	Clinton & Russell	12		1898
Fair Store	Chicago	William Le Baron Jen- ney	11	165	1891
Farmer's Loan & Trust	New York	Charles W. Clinton	8		1889
Fidelity	Baltimore	Baldwin & Pennington	8		1894
Fidelity & Casualty	New York	Cyrus L. W. Eidlitz	11		1894
Fifth Avenue & 45th Street	New York		13	164	1899
Fifth Avenue Hotel	New York	Washburn, Thomas	6		1859
First Nat. Bank of Pittsburgh	Pittsburgh		7		1870
First National Bank	New York	Peabody & Stearns	9		1884
Fisher	Chicago	D. H. Burnham & Co.	18	235	1896
Flatiron	Atlanta	Bradford Lee Gilbert	11		1897
Foreman & Kohn	Chicago	Bauer & Hill	10	150	1886
Fort Dearborn	Chicago	Jenney & Mundie	16		1895
Francis H. Leggett	New York	George W. DaCuna	9		1882
Franklin	Philadelphia	Frank Furness	7		1895
Franklin	New York	Clinton & Russell	12		1899
Franklin MacVeagh	Chicago	D.H. Burnham & Co.	10		1898
Fulton	New York	De Lemos & Cordes	9		1893
Furniture Block	Cleveland	Coburn & Barnum	6		1882
Gaff	Chicago	Stephen V. Shipman	9		1884
Gage	Chicago	Sullivan, Holabird & Roche	8	112	1899
Gallatin	New York	Cady, Berg, & See	9		1886
Garfield	Cleveland	Henry Ives Cobb	10		1893
Gay	St. Louis	Francis Lee & Tho- mas Annan	7		1881
Gerken	New York	Harding & Gooch	13		1896
German Insurance	Buffalo	Richard A. Waite	5		1875
Germania	Milwaukee	Schnetzky & Liebert	8	135	1896
Germania Fire Insurance	New York	Lamb & Rich			1891
Germania Life Insurance	St. Paul	Bassford, Stevens & Ellis	8		1889
Gillender	New York	Berg & Clark	20	273	1897
Gilsey House Hotel	New York	Stephen D. Hatch	7	115	1869

Girard	Chicago	Thomas Hawkes	7		1887
Girard Life Insurance Co.	Philadelphia	Addison Hutton	10	180	1889
Girard Trust	Philadelphia	Addison Hutton	9	180	1889
Globe	St. Paul	Edward Townsend Mix	10		1887
Globe	Minneapolis	Edward Townsend Mix	9		1889
Goldsmith	Milwaukee	William D. Kimball	8		1892
Gorham	New York	Edward Kendall	8		1883
Grace Hotel	Chicago	John M. Van Osdel	8		1889
Graham	New York	Clinton & Russell	12		1898
Grain & Flour Exchange	Boston	Sheply, Rutan, and Coolidge	7		1893
Grain Exchange	Milwaukee	Edward Townsend Mix	6	150	1879
Gramercy Court	New York		13		1895
Gramercy Apartments	New York	George DaCunha	10		1883
Grand Central Station	Chicago	Solon Spencer Be- man	7	247	1891
Grand Hotel	New York	Henry Engelbert	7	121	1868
Grand Pacific Hotel	Chicago	W.W. Boyington	6		1873
Granite	Pittsburgh	Bickel & Brennan	8		1890
Grannis Block	Chicago	Burnham & Root	8		1881
Grant	Atlanta	Bruce & Morgan	10		1898
Great Northern Hotel	Chicago	Burnham & Root	16	200	1892
Guernsey	New York	Richard Morris Hunt	8		1882
Hale	Philadelphia	Willis G. Hale	8		1890
Hammond	Detroit	George H. Edbrooke	10		1890
Hanan	New York	Babb, Cook & Willard	8		1885
Harrison	Philadelphia	Cope & Stewardson	13		1895
Havemeyer	New York	George B. Post	14	192	1892
Hennen	New Or- leans	Thomas Sully	10		1895
Henning & Speed Block	Chicago	Otis L. Wheelock		192	1891
Hickox	Cleveland	George H. Smith	9	156	1890
Hoffman Arms Apartments	New York	Charles Romeyn	9		1884
Holland	St. Louis	Wheeler & McClure	12		1896
Holland House Hotel	New York	Harding & Gooch	9		1889
Hollenden Hotel	Cleveland	George F. Hammond	11		1885
Home Insurance	Chicago	William Le Baron Jen- ney	10	156	1885
Home Insurance	New York	Napolean Le Brun & Sons	16	257	1894
Home Trust Company	Pittsburgh	Bickel & Brennan	8	100	1890
Hotel Henry	Pittsburgh	Alden & Harlow	10		1896
Hotel Margaret	Brooklyn	Frank Freeman	11		1889

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Hotel Walton	Philadelphia	Angus S. Wade	11		1895
Hudson Realty Co.	New York	Clinton & Russell	16	218	1898
Illinois Bank	Chicago		9		1886
Illinois Bell Telephone	Chicago	J.S. Silsbee	7		1888
Illinois Central Station	Chicago	Bradford Lee Gilbert	13	225	1892
Illinois National Bank	Springfield	Bullard & Bullard	6		1894
Illinois Staats Zeitung	Chicago	Bauer & Loebnitz	8		1873
Imperial Apartments	New York	Frederick T. Camp	7		1883
Industrial Exposition	Minneapolis	Hodgson & Son	9	260	1886
Insurance Exchange	Chicago	Burnham & Root	10		1885
Inter-Ocean	Chicago	Adler & Sullivan	8		1890
Isabella	Chicago	Jenney & Mundie	11	110	1892
J.B. Mallers	Chicago	J.J. Flanders	12	175	1885
J.L. Hudson Store	Detroit	Mortimer L. Smith	8		1891
Jackson	New York	William H. Birkire	11		1892
Jackson	Nashville	Henry J. Dudley	7		1896
Jayne	Philadelphia	Johnston, Walter	10	130	1850
John Wolfe	New York	Henry J. Hardenbergh	13		1894
Johnston	New York	James B. Baker	15	212	1899
Judge	New York	McKim, Mead, & White	8		1889
Kaiserhof Hotel	Chicago	Max Teich	8		1892
Kansas City Board of Trade	Kansas City	John Wellborn Root	12		1888
Kedzie	Chicago	Edmund R. Krause	9		1892
Kendall	Chicago	John M. Van Osdel	8		1873
Kenyon	Louisville	Mason Maury	6		1885
Keuffel & Esser	Chicago	Frank B. Abbott	7		1887
Kimball	Chicago	Flanders & Zimmerman	7		1892
Kimball Hall	Chicago	Baumann & Cady	7		1891
Knickerbocker Hotel	New York	Charles W. Clinton	11		1883
Krippendorf	Cincinnati	Louis Piket	7		1888
Kuhn, Loeb & Co.	New York	De Lemos & Cordes	13		1893
Lakota Hotel	Chicago	Clinton J. Warren	10	140	1893
Lancashire Fire Insurance	New York	J. C. Cady & Co.	10		1890
Land Title	Philadelphia	D. H. Burnham & Co.	15		1898
Lawyer's Title Insurance	New York	Charles C. Haight	13		1897
Lees	Chicago	James Gamble Rogers	12	141	1893
Leiter (first)	Chicago	William Le Baron Jenney	7		1879
Leiter (second)	Chicago	William Le Baron Jenney	9	123	1891
Leland	Philadelphia	Stephan D. Button	5		1855
Lienau	New York	Detlef Lienau	6		1883

Lincoln	New York	Robert H. Robertson	9	1887	
Lonsdale	Duluth	Palmer, Hall & Hunt	8	1895	
Lord's Court	New York	John T. Williams	15	214	1895
Lucas	Philadelphia	Willis G. Hale	8	1890	
Ludington	Chicago	Jenney & Mundie	8	112	1891
Lumber Exchange	Minneapolis	Long & Kees	12	141	1888
Lyons	New Orleans	D.W.Kendall	8	1888	
Mack Block	Denver	H.W. and V.E. Baer-resen	6	1890	
Madison Square Garden	New York	Stanford White	16	304	1891
Magee	Pittsburgh	Frederick J. Osterling	8	1892	
Mail & Express	New York	Carrere & Hastings	11	1891	
Majestic	Denver	Frank E. Edbrooke	8	1894	
Majestic	Indianapolis	D. A. Bohlen & Son	10	1895	
Majestic	Detroit	Burnham & Co., Mason & Rice	14	221	1896
Majestic Apartments	Chicago		8	1881	
Majestic Hotel	Chicago	D. H. Burnham & Co.	20	240	1893
Mallers	Chicago	John J. Flanders	12	1884	
Manhattan	Chicago	William Le Baron Jenney	16	200	1891
Manhattan Company	New York	W. Wheeler Smith	9	1885	
Manhattan Hotel	New York	Henry J. Hardenbergh	16	225	1897
Manhattan Life Insurance	New York	Kimball & Thompson	19	348	1894
Marburg	Baltimore	Charles L. Carson	8	1887	
Market & Fulton National Bank	New York	William B. Tubby	9	1889	
Marquette	Chicago	Holabird & Roche	16	207	1894
Marshall Field & Co.	Chicago	D.H. Burnham & Co.	9	1892	
Martinique Hotel	New York	Henry J. Hardenbergh	15	1897	
Masonic Temple	Minneapolis	Long & Kees	8	1890	
Masonic Temple	Chicago	Burnham & Root	22	300	1892
McClurg	Chicago	Holabird & Roche	9	125	1899
McCormick Harvesting Machine	Chicago	Burnham & Root	7	1886	
McGill	Washington, D.C.	Paul J. Pelz	8	1891	
McIntyre	New York	Robert H. Robertson	10	1890	
McKinlock	Chicago	Charles S. Frost	10	1898	
McPhee Block	Denver	Frank E. Edbrooke	6	1889	
Medinah	Chicago	Beers, Clay & Dutton	14	1893	
Memphis Appeal	Memphis	E. C. Jones	6	1890	
Merchants	Chicago	Otis L. Wheelock	7	1873	
Merchants & Manhattan Bank	New York	W. Wheeler Smith	9	1884	
Merchants Laclede	St. Louis	Stephan D. Hatch	8	1889	

Merrill	Milwaukee	Van Ryn, Andree, & Lesser	7		1888
Methodist Book Concern	Chicago	Harry B. Wheelock	11		1899
Metropole Hotel	Chicago	Clinton J. Warren	7		1891
Metropolitan Life Insurance	New York	Napolean Le Brun	8		1875
Metropolitan Life Insurance	New York	Napolean Le Brun & Sons	10	159	1893
Metropolitan Opera House	New York	Josiah Cleveland Cady	7		1883
Metropolitan Telephone	New York	Cyrus L. W. Eidritz	15		1896
Meyer	Chicago	Adler & Sullivan	7		1893
Michigan Hotel	Chicago	Clinton J. Warren	10		1892
Michigan Trust Co.	Grand Rapids	Solon Spencer Beaman	10		1892
Midland Hotel	Kansas City	John Wellborn Root	8		1888
Mills	New York	George B. Post	10		1883
Mills	San Francisco	John Wellborn Root	10		1892
Mills & Gibb	New York	John Correja	6		1880
Milwaukee City Hall	Milwaukee	H. C. Koch & Co.	9	350	1895
Milwaukee Sentinel	Milwaukee	Walter A. Holbrook	9		1895
Mining Exchange	Denver	Kirshner & Kirshner	10	165	1891
Minnesota Loan & Trust	Minneapolis	Hodgson & Son	8	150	1885
Mitchell	Milwaukee	Edward Townsend Mix	6	130	1876
Mohawk	New York	Robert H. Robertson	9		1891
Mohawk	Cleveland	Charles F. Schweinfurth	13		1895
Monadnock Block (north half)	Chicago	Burnham & Root	16	215	1891
Monadnock Block (south half)	Chicago	Holabird & Roche	17	204	1893
Monon	Chicago	John M. Van Osdel	13		1890
Montauk Block	Chicago	Burnham & Root	10	130	1882
Morris	New Orleans	Thomas Sully	7		1889
Morris	New York	Youngs & Cable	10		1891
Morrison Hotel	Chicago	Marshall & Fox	8		1883
Morse	New York	Silliman & Farnsworth	9	165	1880
Mortimer	New York	George B. Post	9		1884
Morton	Chicago	Jenney & Mundie	12		1896
Murtland	Pittsburgh	Alden & Harlow	8		1898
Mutual Life Ins. (140 Bwy.)	New York	John Kellum	8	157	1871
Mutual Life Ins. (34 Nassau)	New York	Charles W. Clinton	9		1884
Mutual Life Insurance	New York	Clinton & Russell	14	230	1897
Mutual Reserve	New York	William H. Hume	14	184	1894
Nasby	Toledo	E. O. Fallis	13	161	1893
National Bank of Commerce	Minneapolis	Harry W. Jones	6		1888

National Bank of Commerce	New York	J. B. Baker	19	264	1897
National Union	Toledo	E. O. Fallis	7		1893
New England	Cleveland	Shepley, Rutan, & Coolidge	15		1896
New England Mutual Life	Boston	Nathaniel J. Bradlee	6		1873
New Netherland Hotel	New York	Wm. Hume & Ralph Townsend	16	234	1892
New York Cotton Exchange	New York	George B. Post	8		1885
New York Evening Post	New York	Mengelson & Stent	10	140	1875
New York Life Insurance	St. Paul	Babb, Cook, & Willard	10		1889
New York Life Insurance	Minneapolis	Babb, Cook, & Willard	10		1890
New York Life Insurance	Kansas City	McKim, Mead, & White	12	170	1890
New York Life Insurance	Omaha	McKim, Mead, & White	12	170	1890
New York Life Insurance	Chicago	Jenney & Mundie	14	166	1894
New York Life Insurance	New York	McKim, Mead, & White	12	244	1896
New York Mutual Life	Boston	Peabody & Stearns	7	234	1875
New York Post Office	New York	Alfred B. Mullett	7	195	1875
New York Produce Exchange	New York	George B. Post	14	225	1884
New York Realty	New York		15	203	1898
New York Times	New York	George B. Post	13	240	1889
New York Tribune	New York	Richard Morris Hunt	9	260	1875
Newberry & McMillan	Detroit	Gordon W. Lloyd	6		1879
Newbury	Chicago	Jules F. Wegman	8		1896
Nixon	Chicago	Otto H. Matz	6		1871
Northwestern Guaranty Loan	Minneapolis	Edward Townsend Mix	12		1890
Northwestern Mutual Life Ins.	Milwaukee	Solon Spencer Beaman	6		1886
O.B. Potter Trust	New York		20	293	1898
Observatory	Des Moines	Charles E. Eastman	13	197	1896
Occidental	Chicago	John M. Van Osdel II	8		1895
Odd Fellows	St. Louis	Henry Issacs	7		1888
Ogden	Chicago	John M. Van Osdel	8		1885
Old Colony	Chicago	Holabird & Roche	17	213	1894
Omaha	Chicago	John M. Van Osdel	7		1884
Omaha Bee	Omaha	Solon Spencer Beaman	8		1887
One Maiden Lane	New York		18	160	1899
Oneida Block	Minneapolis	Long & Kees	7		1888
Onondaga Co. Savings Bank	Syracuse	Robert W. Gibson	10		1897
Ontario Hotel	Chicago	Treat & Foltz	7		1881
Oregonian	Portland	Reid Brothers	12	194	1892
Osborne Apartments	New York	James E. Ware	11		1885

Owings	Chicago	O.J. Pierce	8		1889
Owings Block	Chicago	Cobb & Frost	14	161	1891
Oxford	Chicago	Clinton J. Warren	8		1891
Pabst	Milwaukee	Solon Spencer Be-man	14	230	1892
Pabst Hotel	New York	Henry Kilburn, Otto Strack	9		1898
Palmer House Hotel	Chicago	Van Osdel & Palmer	9		1875
Park	Pittsburgh	George B. Post	15		1896
Park Avenue Hotel	New York	John Kellum	8	102	1878
Park Row	New York	Robert H. Robertson	29	382	1899
Parker	Chicago	John M. Van Osdel	7		1883
Parker House Hotel	Boston	Washburn & Bryant	8		1886
Penn Mutual	Philadelphia	T.P. Chandler Jr.	8		1891
Pennsylvania Station	Philadelphia	Frank Furness	11		1882
Pennsylvania Station	Pittsburgh	Daniel Burnham	12		1893
People's Nat. Savings Bank	Denver	Frank E. Edbrooke	9		1890
Perry-Payne	Cleveland	Cudell & Richardson	8		1889
Philadelphia City Hall	Philadelphia	John MacArthur	9	548	1894
Phoenix	Chicago	Burnham & Root	11		1887
Pickwick Flats Apartments	Chicago	John Wellborn Root	7		1887
Pierce	New York	Carrere & Hastings	7		1892
Pioneer	Seattle	Fisher, Anderson	7		1890
Pioneer Press	St. Paul	Solon Spencer Be-man	12	155	1889
Plaza Hotel	New York	Fife & Campbell, MM & W	8		1890
Plaza Hotel	Chicago	Clinton J. Warren	8		1892
Plymouth	Chicago	Simeon B. Eisendrath	11		1899
Polhemus Clinic	Brooklyn	Marshall Emery	8		1897
Pontiac	Chicago	Holabird & Roche	14	170	1891
Portland Block	Chicago	William Le Baron Jen-ney	8		1872
Post	New York	George B. Post	8		1881
Post Office/Sub-Treasury	Boston	A.B. Mullet	7	126	1871
Postal Telegraph	New York	Harding & Gooch	13	192	1892
Potter	New York	N. G. Starkweather	11	195	1883
Powers	Rochester	Andrew J. Warner	8	175	1888
Presbyterian	New York	Rowe & Baker	13		1894
Price	Chicago	Holabird & Roche	8		1897
Prudential	Newark	George B. Post	11	150	1892
Prudential	Buffalo	Adler & Sullivan	13		1896
Puck	New York	Albert Wagner	9		1886
Pullman	Chicago	Solon Spencer Be-man	10	162	1885

Pullman Office/Water Tower	Chicago	Solon Spencer Be-man	13	195	1880
Queens Insurance Co.	New York	Harding & Gooch	15	195	1897
R.G. Dun	New York	Harding & Gooch	15	223	1898
R.R. Donnelly	Chicago	Howard Van Doren Shaw	7		1897
Rand McNally	Chicago	Burnham & Root	10	148	1890
Reaper Block	Chicago	John M. Van Osdel	6	65	1873
Record	Philadelphia	Willis G. Hale	8		1881
Reibold	Dayton	Williams and Andrews	11	155	1896
Reliance	Chicago	D. H. Burnham & Co.	14	200	1895
Rennert Hotel	Baltimore	E. F. Baldwin	6		1885
Republican	St. Louis	Walsh & Jungsenfeld	5		1873
Revell	Chicago	Adler & Sullivan	6		1883
Review	Spokane	C. B. Seaton & C. Ferris	11		1891
Rhinelander	New York	Clinton & Russell	12		1895
Rialto	Chicago	Burnham & Root	9		1886
Rialto	St. Louis	Issac Taylor	10		1895
Richardson	Chicago	George F. Kimball	7		1886
Richardson	Chattanooga	S. M. Patton	7		1888
Roanoke	Chicago	Dixon & Hamilton	7		1872
Robert Law	Chicago	John M. Van Osdel	7		1887
Rookery	Chicago	Burnham & Root	11	165	1886
Root McBride	Cleveland	Cudell & Richardson	9		1884
Rose	Cleveland	George H. Smith	10		1898
Rouss	New York	Alfred Zuker	10		1890
Royal Insurance	Chicago	W.W. Boyington	13		1885
Sampson	New York	Clinton & Russell	16		1898
Savoy Hotel	New York	Hume & Townsend	15		1892
Schermerhorn	New York	George B. Post	8		1890
Schiller	Chicago	Adler & Sullivan	16	211	1892
Schlesinger & Meyer	Chicago	W.W. Boyington	7		1873
Schlesinger & Meyer Store	Chicago	Louis Sullivan	12	168	1899
Sears	Boston	Cummings & Sears	7		1868
Seattle National Bank	Seattle	John Parkinson	7		1890
Second Leiter	Chicago	William Le Baron Jen-ney	8	133	1891
Security	St. Louis	Peabody, Stearns & Furber	11		1891
Shepherd Centennial	Washington, D.C.		6		1875
Sherry's Hotel	New York	McKim, Mead, & White	11	161	1898
Shillito's Department Store	Cincinnati	James McLaughlin	6		1878
Shoe & Leather Bank	New York	J. C. Cady & Co.	12		1893

Silversmith	Chicago	D.H. Burnham & Co.	10		1897
Singer	New York	Ernest Flagg	14	197	1898
Society for Savings	Cleveland	Burnham & Root	10		1890
Southern Railway	Washington, D.C.	William M. Poindexter	7		1899
Spangler (second)	New York	William H. Hume & Sons	8	155	1896
Spitzer	Toledo	Bacon & Huber	10		1896
St. Germain Hotel	New York		9		1859
St. James Hotel (first)	New York				1866
St. James Hotel (second)	New York	Bruce Price	16	204	1897
St. Louis Life Insurance	St. Louis	George I. Barnett	6		1874
St. Paul	Cincinnati		9		1884
St. Paul	New York	George B. Post	26	313	1899
Staats-Zeitung	New York	William Schickel	5		1873
Standard Oil	New York	Ebenezer L. Roberts	9		1886
Standard Oil	New York	Kimball & Thompson	19	280	1896
Standard Oil	New York	Ebenezer L. Roberts	15	263	1899
Stevens	New York	Charles W. Clinton	8		1895
Stevens House Hotel	New York	Richard Morris Hunt	8		1872
Stewart	Chicago	D.H. Burnham & Co.	12		1897
Stokes	New York	Clinton & Russell	10		1893
Stratford Hotel	Chicago	W.W. Boyington	6		1872
Studebaker (Michigan Avenue)	Chicago	Solon Spencer Be- man	8		1885
Studebaker (Wabash Avenue)	Chicago	Solon Spencer Be- man	10	135	1896
Syndicate	New York	Lamb & Rich	15	207	1896
Syracuse Savings Bank	Syracuse	Joseph Lyman Sils- bee	8	170	1875
Tacoma	Chicago	Holabird & Roche	13	165	1889
Tarrant	New York	Henry Rutgers Mar- shall	7		1892
Taylor	New York	Otto Wirz	12		1891
Telephone	New York	Cyrus L. W. Eidritz	7		1890
Temple Court	New York	Silliman & Farnsworth	10	142	1882
Temple Court	Minneapolis	Edward Townsend Mix	8		1886
Temple Court	Chicago	John M. Van Osdel	8		1886
Terminals	Chicago	John M. Van Osdel	14	170	1892
Teutonic	Chicago	Handy & Cady	10		1893
Times Block	New York	Thomas R. Jackson	5	80	1857
Title & Trust	Chicago	Henry Ives Cobb	16	198	1891
Torrey	Duluth	Traphagen and Fitz- patrick	12		1892
Tower	Philadelphia	Samuel Sloan	7		1855

Tower	New York	Bradford Lee Gilbert	11	129	1889
Townsend	New York	Cyrus L. W. Eidlitz	12	165	1897
Traders	Chicago	John Wellborn Root	8		1885
Troescher	Chicago	Adler & Sullivan	6		1884
Trude	Chicago	Jenney & Mundie	16		1897
U.S. Appraiser's	Chicago	James Freret	8		1891
Union	New York	Alfred Zuker	11		1892
Union League Club	Chicago	William Le Baron Jenney	7		1886
Union Trust	New York	George B. Post	11	180	1890
Union Trust	St. Louis	Adler & Sullivan, Ramsey	15		1893
Union Trust	Detroit	Donaldson & Meier	11		1895
United Bank	New York	Peabody & Stearns	9		1881
United Charities	New York	J. B. Baker	9		1891
United States National Bank	Omaha	Isaac Hodgson, Jr.	5		1889
United States Trust Co.	New York	Robert W. Gibson	9		1889
Unity	Chicago	Clinton J. Warren	17	210	1892
University Block	Syracuse	Green & Wicks	10		1897
Vanderbilt	New York	McKim, Mead, & White	15		1891
Vandergrift	Pittsburgh	Longfellow, Alden & Harlow	7		1892
Venetian	Chicago	Burnham & Roche	13	181	1892
Victoria Hotel	Chicago	Gregory Vigeant	7		1885
Vincent	New York	George B. Post	14	205	1899
Virginia Hotel	Chicago	Clinton J. Warren	10	150	1890
Wainwright	St. Louis	Adler & Sullivan, Ramsey	10	135	1892
Waldorf-Astoria Hotel	New York	Henry J. Hardenbergh	16	214	1897
Wallace	New York	Otto Wirz	12		1893
Ward	Chicago	Beers, Clay & Dutton	8		1885
Warren	New York	McKim, Mead, & White	7		1890
Washington	New York	Edward H. Kendall	13	258	1884
Washington Hotel	Chicago	Jarvis Hunt	11		1897
Washington Life Insurance	New York	Cyrus L. W. Eidlitz	19	273	1898
Washington Post	Washington D.C.	Appleton P. Clark, Jr.	7		1893
Watson	Chicago		9		1893
Weld	New York	George B. Post	14		1895
Welles	New York	Walden Pell Anderson	9	145	1883
West End Trust Co.	Philadelphia	Frank Furness	14		1898
Western Electric	New York	Cyrus L. W. Eidlitz	10		1889
Western National Bank	New York	George B. Post	7		1898

Western Reserve	Cleveland	Burnham & Root	8		1891
Western Union - 5th & 23St.	New York	Henry J. Hardenbergh	7		1884
Western Union - Broad Street	New York	Henry J. Hardenbergh	8		1883
Western Union Telegraph	New York	George B. Post	10	230	1875
Westinghouse	Pittsburgh		10		1889
Wilder	Rochester, N.Y.	Warner & Brocket	12	170	1888
Wilke	Chicago		7		1885
Wilks	New York	Clinton & Russell	9		1889
Williams	Chicago	Holabird & Roche	10	140	1898
Willoughby	Chicago	Leroy Buffington	9		1887
Winthrop	Boston	Clarence H. Blackall	9		1893
Wolff	New York	De Lemos & Cordes	9		1891
Woman's Temple	Chicago	Burnham & Root	13	197	1892
Wonderly	Grand Rap- ids		6		1890
Woodbridge	New York	Clinton & Russell	12		1897
Woolworth	Lancaster, PA.	Ditmars & Sheckels	6		1899
World	New York	George B. Post	23	309	1890
Worthington	Boston	Carl Fehmer	10		1894
Wyandotte	Columbus	D. H. Burnham & Co.	11		1898
Yondorf	Chicago	Flanders & Zimmer- man	10		1893
Zimmerly	Wichita	Dumont & Hayward	6		1888

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Notes

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- ¹ John Ruskin, Lectures on Architecture and Painting Lecture I of The Seven Lamps of Architecture (Boston: Dana Estes & Company, undated), 236.
- ² Dictionary.com 29 Sept. 2004. <<http://dictionary.reference.com/search?q=skyscraper>>
- ³ Col. W.A. Starrett, Skyscrapers and the Men Who Build Them (New York: Charles Scribner's Sons, 1928), 35
- ⁴ Thomas A.P. Leeuwen, The Skyward Trend of Thought (Cambridge: The MIT Press, 1986), 4
- ⁵ Francisco Mujica, History of the Skyscraper (Paris: Archaeology & Architecture Press, 1929) 21
- ⁶ Donald Martin Reynolds, The Architecture of New York City (New York: Macmillan Publishing Company, 1984), 147
- ⁷ Lynn S. Beedle, ed., Council on Tall Buildings and Urban Habitat, Second Century of the Skyscraper (New York: Van Nostrand Reinhold Company, 1988), 11
- ⁸ W.C. Clark and J.L. Kingston, The Skyscraper (New York: American Institute of Steel Construction, Inc., 1930), 2.
- ⁹ The Real Estate Record Association, A History of Real Estate, Building and Architecture in New York City During the Last Quarter of a Century (1898; rpt. New York: Arno Press, 1967), 466.
- ¹⁰ Roger Shepard, Skyscraper The Search for an American Style (New York: McGraw-Hill, 2003), 29. Rpt. Architectural Record, First Skyscraper Demolished, Notes In Brief, Vol. 64, No. 4, October 1928, pp. 146-147.
- ¹¹ The Heineman is also known as 130 Bush Street and stands in San Francisco's financial district. Architect George Applegarth's design employs a single, three-sided bay window stack and draws on Gothic precedent, appropriate for its slender profile.
- ¹² The Monadnock, Ames, and Potter are all buildings with no steel skeletons, yet, are an earlier age's best effort at building design. These are exquisite examples of early skyscrapers. Of course today America's AON Center in Chicago is the country's tallest skyscraper with a concrete frame. It stands eighty stories, 1,136 feet tall. Who would deny its rightful place in the annals of skyscraper history by virtue of an unnecessarily narrow and foolish definition?
- ¹³ Bell towers, churches, silos, windmills, lighthouses, memorials, monuments, observation towers and the like are not skyscrapers.

CHAPTER ONE: COURAGEOUS BEGINNINGS 1850-1874

- ¹⁴ At its completion, Philadelphia's 10-story Jayne Building did include flush toilets on every floor – a welcome exception to the norm.

¹⁵ S. Compton Smith, Milwaukee of Today the Cream City of the Lakes 1874.

¹⁶ Peter Cooper (1791-1883) was an entrepreneur, philanthropist, inventor, manufacturer, and a one-time presidential candidate (1876). His school, Cooper Union for the Advancement of Science and Art, provided free education to gifted students from lower-income families.

¹⁷ Frank A. Randall, History of the Development of Building Construction in Chicago (Urbana: The University of Illinois Press, 1949), 60.

¹⁸ D.J. Kenny, Illustrated Guide to Cincinnati and the World's Columbian Exposition (St. Louis: The Pacific Publishing Co., 1893), 60.

¹⁹ Jason Goodwin, Otis Giving Rise to the Modern City (Chicago: Ivan R. Dee, 2001), 17.

²⁰ It was at this time that architect Walter was planning the additions to the nation's capitol. He designed two prominent wings, and later, its cast-iron dome. Walter continued as Capitol architect until 1865.

²¹ Church steeples, domes, lighthouses, and decorative towers must be considered "un-inhabitable" by their very purpose and are largely unreachable by all except pigeons.

²² Sloan was undoubtedly aware of the Smithsonian Institution (James Renwick, 1849) and other Gothic-Revival buildings that featured similar lookout towers and simply borrowed the form.

²³ See Samuel Sloan Architect of Philadelphia 1815-1884, by Harold N. Cooledge, Jr., Philadelphia: University of Pennsylvania Press, 1986, 50-52.

²⁴ New York's Haughwout Building (John P. Gaynor, 1857) was the first to feature passenger elevators.

²⁵ J. Morgan Slade (109 Prince Street, 1882), and J.F. Duckworth (28-30 Greene and 32 Greene Streets, 1872 and 1873 respectively) can be cited.

²⁶ Henry Collins Brown, Valentine's City of New York (New York: Valentine's Manual, Inc., 1920), 14.

²⁷ Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 149.

²⁸ This crown was stolen by the Bennett Building's addition of 1889.

²⁹ Chicago, too, was the home of a German newspaper titled the Staats-Zeitung. This daily was headquartered in an office building described as "a prominent and tasteful structure of the old style." It was replete with exterior statuary and was constructed to the plans of architects Bauer and Loebnitz of Chicago. It measured forty feet by 110 feet, stood six stories, ninety feet tall. It contained thirty offices, had its newspaper presses anchored in its basement, and had only one elevator. It was, like its Manhattan counterpart, also constructed in 1873 and, it too, is now only a distant memory.

³⁰ New York Times, April 6, 1907.

CHAPTER TWO: CONTINUED EXPERIMENTATION 1875-1889

³¹ Captain Willard Glazier, Peculiarities of American Cities (Philadelphia: Hubbard Brothers, Publishers, 1884), 290-291.

³² Henry Collins Brown, Valentine's City of New York, 84-85, 1920.

³³ "Insurance Companies," The 1895 World Almanac, 459.

³⁴ Meyer Berger, The Story of the New York Times 1851-1951 (New York: Simon and Schuster, 1951), 56.

³⁵ The Rand McNally Building did also stand by means of one party wall, a load bearing wall that helped support it. Nonetheless, there were no iron or timber structural members, everything else was indeed steel.

³⁶ "The Tribune's New Home," New York Daily Tribune 10 April 1875: 9 +.

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- ³⁷ "The Metropolitan Newspaper." Harper's New Monthly Magazine, December 1877: 43-44.
- ³⁸ "Western Union Telegraph Building," The Aldine Jan. 1875: 258. (Italics added)
- ³⁹ In 1898 the Vitagraph Company, a pioneer motion picture producer, was founded in the Morse Building. For two years the skyscraper's roof served as an exterior studio.
- ⁴⁰ Architectural Aberrations – No. 18, The Nassau-Beekman, The Architectural Record, Vol. XII, No. 1, May, 1902, pp. 93-98.
- ⁴¹ Architectural Aberrations, The Architectural Record, Vol. 1, No. 3, January-March, 1892, 262.
- ⁴² Captain Willard Glazier, Peculiarities of American Cities (Philadelphia: Hubbard Brothers, Publishers, 1884), 389.
- ⁴³ Architectural Aberrations, The Architectural Record, Vol. 1, No. 3, January-March, 1892, 264.
- ⁴⁴ Frank A. Randall, History of the Development of Building Construction in Chicago, (Urbana: The University of Illinois Press, 1949), 93.
- ⁴⁵ Thomas Eddy Tallmadge, Architecture in Old Chicago, (Chicago: The University of Chicago Press, 1941), 142.
- ⁴⁶ Louis H. Sullivan, The Autobiography of an Idea, (1924; rpt. New York: Dover Publications, 1956), 291.
- ⁴⁷ By comparison, New York's venerable Carnegie Hall seats 2,700.
- ⁴⁸ The Guilds' Committee for Federal Writers' Publications, Inc., New York City Guide (New York: Random House, 1939), 322-23.
- ⁴⁹ Walt Whitman, Leaves of Grass, Song of the Broad-Axe
- ⁵⁰ Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 81.
- ⁵¹ Irving K. Pond, "Neither a Skyscraper nor of Skeleton Construction," The Architectural Record August 1934: Vol. 76, No. 2, 118-119.
- ⁵² Thomas Eddy Tallmadge, Architecture in Old Chicago (Chicago: The University of Chicago Press, 1941), 187.
- ⁵³ Miles L. Berger, They Built Chicago (Chicago: Bonus Books, Inc., 1992), 61-62.
- ⁵⁴ Frank A. Randall, History of the Development of Building Construction in Chicago (Urbana: The University of Illinois Press, 1949), 162.
- ⁵⁵ A careful examination of the chart "Prominent Nineteenth Century Skyscrapers" will bear this out. Reliable data, especially pertaining to height measured in feet, is especially difficult to come by. With this in mind, it was felt to rank here only according to number of floors. Of course some rogue skyscrapers may have been overlooked in this compendium, some perhaps taller than the Home Insurance, forcing it even lower in this "skyscraper" list. It is very doubtful that will occur.
- ⁵⁶ In 1891, two more floors were added adjusting its height to 180 feet.
- ⁵⁷ John J. Flinn, The Standard Guide to Chicago for the Year 1892 (Chicago: The Standard Guide Company, 1892), 574-575.
- ⁵⁸ The Chicago Association of Commerce, Guide to Chicago (Chicago: 1909), 128.
- ⁵⁹ Frank A. Randall, History of the Development of Building Construction in Chicago (Urbana: The University of Illinois Press, 1949) 172.
- ⁶⁰ Thomas Eddy Tallmadge, Architecture in Old Chicago (Chicago: The University of Chicago Press, 1941), 151.
- ⁶¹ John J. Flinn, The Standard Guide to Chicago for the Year 1892 (Chicago: The Standard Guide Co., 1892), 576.
- ⁶² G&C. Merriam Co., Webster's New Collegiate Dictionary (Springfield, MA.: G.&C Merriam Co., 1977), 1005.

⁶³ In 1905, architect Frank Lloyd Wright remodeled the interior court. He replaced the "Romanesque" light standards, stair railings, and decorative newel posts with his characteristic planters and "space ship" chandeliers, all of course looking positively silly-there. What preceded this mischief were perfectly appropriate items for the space, they were characteristic of the times in which the Rookery was constructed, and were either designed by, or at least contracted by, Root himself.

⁶⁴ Mariana Griswold Van Rensselaer, Henry Hobson Richardson and His Works (1888; rpt. New York: Dover Publications, Inc., 1969), 98.

⁶⁵ Cass Gilbert, Garber and Woodward, 38 floors, 495 feet tall, 1913.

⁶⁶ Henry Collins Brown. Valentine's City of New York. (New York: Valentine's Manual, Inc., 1920), 69-70. (italics added)

⁶⁷ Francisco Mujica, History of the Skyscraper, 2nd ed. (Paris: Archaeology & Architecture Press, 1929), 55.

⁶⁸ "Disputes of Architects Question About the Invention of the Skeleton Construction." New York Times 19 August 1899: Sec. 1, 12, col. 3.

⁶⁹ See "As To Skeleton Construction", New York Times, 24 August 1899: Sec. 1, 7, col. 2. John B. Snook (1815-1901) claims to have designed a "comparatively small building" at the southwest corner of Centre and Pearl Streets in Manhattan. Snook insisted that it possessed all of the conditions necessary to rank this, his building, the earliest and consequently the first of its type.

⁷⁰ John J. Flinn, The Standard Guide to Chicago for the Year 1892 (Chicago: The Standard Guide Co., 1892), 570.

⁷¹ Flinn 571.

⁷² Another favorite of Bostonians was the long demolished Sears Building of 1868. In the accompanying view the squarish marble-faced building to the left of the Ames was the Sears Building, designed by the Boston architectural firm of Cummings & Sears. It rose seven floors and reportedly housed Boston's first passenger elevator installed in an office building. With faint Gothic detailing it must have provided quite a foil to the taller and bulkier Ames Building across the street.

⁷³ Only the Philadelphia City Hall at nine floors, 547 feet tall, and Chicago's Monadnock Building at sixteen floors, 215 feet tall, surpass the Ames.

⁷⁴ John J. Flinn, The Standard Guide to Chicago for the Year 1892, (Chicago: The Standard Guide Co., 1892), 575.

⁷⁵ Col. W.A. Starrett, Skyscrapers and the Men Who Build Them, (New York: Charles Scribner's Sons, 1928), 34.

⁷⁶ Col. W. A. Starrett, Skyscrapers and the Men Who Build Them (New York: Charles Scribner's Son, 1928) 32.

⁷⁷ John J. Flinn, The Standard Guide to Chicago for the Year 1892 (Chicago: The Standard Guide Co., 1892), 571.

⁷⁸ The Tacoma Building's "mat foundation" consisted of a four-foot-thick concrete slab into which was embedded 120 tons of iron rails. This "mat" occupied the building's entire footprint and proved to be virtually indestructible owing to its incredible compressive strength.

⁷⁹ "World's First 'Skyscraper,' In Chicago Loop, to Be Raz'd," New York Times 22 April 1929: Sec. 1, 27, col. 2.

⁸⁰ John J. Flinn, The Standard Guide to Chicago for the Year 1892 (Chicago: The Standard Guide Co., 1892), 138.

⁸¹ Thomas Eddy Tallmadge, Architecture in Old Chicago (Chicago: The University of Chicago Press, 1941), 157.

⁸² Barr Ferree, "The High Building and Its Art," Scribner's Magazine March 1894: 297-318.

⁸³ In June 1889, the national republican convention was held in the yet-unfinished Auditorium. Twelve-thousand in attendance saw Benjamin Harrison nominated for the presidency - which he later won.

⁸⁴ Flinn 138

⁸⁵ Flinn 140-141

⁸⁶ Tim Samuelson and Jim Scott, "Auditorium Album," Inland Architect September/October 1989: 64-71.

⁸⁷ Flinn 141

⁸⁸ The Chicago Association of Commerce, Guide to Chicago (Chicago: 1909), 94.

CHAPTER THREE: THE GILDED AGE AND THE NEW ARISTOCRATS 1890-1899

⁸⁹ Absent were the New York Tribune (1872), Staats-Zeitung (1888), Mail & Express (1888), and the New York Times (1891).

⁹⁰ John Ruskin, The Seven Lamps of Architecture Lectures on Architecture and Painting The Study of Architecture (Boston: Dana Estes & Company, undated), Lecture 1, 243-244.

⁹¹ The mail chute, a novel idea, was invented by architect J.G. Cutler of Buffalo and first employed in the Wilder Building (1888). He established the Cutler Mail Chute Company and catered to the "skyscraper trade."

⁹² "The Day Celebrated," Des Moines Leader 5 July 1896. A never-before experienced eyewitness report of Independence Day celebrations from the top of the Observatory Building.

⁹³ "Imposing Observatory Building," Saturday Review 22 August 1896.

⁹⁴ Architectural Aberrations, No. 9 – The Hale Building, The Architectural Record, Vol. III, October-December, 1893, No. 2, 207.

⁹⁵ Architectural Aberrations, No. 9 – The Hale Building, The Architectural Record, Vol. III, October-December, 1893, No. 2, 207-210.

⁹⁶ Carl W. Condit, The Chicago School of Architecture Chicago: The University of Chicago Press, 1964), 102.

⁹⁷ The architect for these three was the noted John M. Van Osdel.

⁹⁸ The Como Block stood eight stories, 95 feet tall. It fronted forty feet on Dearborn, was eighty feet deep, had a steel frame and housed two retail stores, twenty-five offices, and two passenger elevators. The Como Block was demolished c.1953 when Congress Street was widened.

⁹⁹ The Manhattan Building has often, and erroneously, been labeled "once Chicago's tallest building." It never was Chicago's tallest and upon its completion it ranked fifth in height behind (in order by height in floors and feet) the Chicago Board of Trade (9, 322), Auditorium (18, 270), Grand Central Station (7, 247), and the Monadnock (16, 215).

¹⁰⁰ Ostensibly, iron was used throughout because the price of Bessemer steel beams was too costly.

¹⁰¹ Jenney's real concern, more practical than pretty, was to secure as much light as possible for the tenants of the Manhattan. Across the street stood the thirteen-story Monon Building and the twelve-story Caxton Building, both shadow generators. By pushing outward it was possible to steal more sunlight than what might otherwise have been possible.

¹⁰² Heisen sold his other skyscrapers in short order: the Como in 1889 and the Monon in 1891.

¹⁰³ Sigfried Giedion, Space, Time and Architecture the Growth of a New Tradition (Cambridge: Harvard University Press, 1982), 383.

¹⁰⁴ Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 89.

¹⁰⁵ Sigfried Giedion, Space, Time and Architecture the Growth of a New Tradition (Cambridge: Harvard University Press, 1982), 382. Gideion says unequivocally that the Second Leiter Building was "...the first building in which there was not even one self-supporting wall..."

¹⁰⁶ Charles C. Baldwin, Stanford White (1931; rpt. New York: Da Capo Press, 1971), 208.

¹⁰⁷ Christopher Alexander, A Pattern Language, High Places, 316, 1977.

¹⁰⁸ The Seville Cathedral dates to 1432-67 and was built upon the site of a mosque. The mosque's minaret, the *Giralda*, dates back to 1184-98 and was converted into a Christian bell tower. Still standing, the *Giralda* rises 275 feet, just twenty-nine feet shy of the Garden's Tower.

¹⁰⁹ N. Hawkins, M.E., New Catechism of Electricity, A Practical Treatise (New York: Theo. Audel & Company, 1896), Fig. 43, 98. Inside: "This work is respectfully dedicated to Thomas A. Edison, of Llewellyn Park, N.J."

¹¹⁰ Marcus Whiffen and Frederick Kooper, American Architecture Volume 2: 1860-1976 (Cambridge: The MIT Press, 1983), 246.

¹¹¹ Paul Goldberger, The Skyscraper (New York: Alfred A. Knopf, 1981), 24.

¹¹² The following claim is made in The Sky's the Limit (New York: Rizzoli International Publications, Inc., 1990, 42) that disputes long held findings with regard to the construction method of the Monadnock Block's south half: "Although it is commonly believed the southern addition employs a skeleton construction, recent work on the Monadnock indicates that only the last quadrant is supported by a steel frame." Definitive or empirical findings, one way or the other, are outside the scope of this book but are offered here as new information only.

¹¹³ It was indeed Peter Brooks who was responsible for naming the building. As early as 1885 he settled upon *Monadnock*, the name of a 3,165-foot-tall mountain in New Hampshire. The north or Jackson Street entrance was slated to be the main entrance and there intaglio-carved in a massive granite lintel still reads "Monadnock."

¹¹⁴ According to Donald Hoffmann, in The Architecture of John Wellborn Root (Chicago: The University of Chicago Press, 1973, 155), architect Root "had the design [of the Monadnock Building] in his mind for more than five years."

¹¹⁵ Various sources list at least "some" of the Monadnock's exterior walls as six, eight, twelve, and even a whopping fifteen feet thick! At the Jackson Street (main) entrance the walls, measured from outer face to inner face, were indeed recorded at six feet thick.

¹¹⁶ Barr Ferree, "The High Building and its Art," Scribner's Magazine March 1894: 297-318.

¹¹⁷ The Lincoln-Liberty Building (Philadelphia National Bank Building) stands twenty-eight floors, 472 feet tall – more than twice the height of the Betz Building. The Lincoln-Liberty was completed in 1932 to the plans of architect John Torrey Windrim (1866-1934).

¹¹⁸ It is impossible to say whether or not architect Root was inspired by this exact building, but certainly the tenor of his design owes something to the architecture of the French Renaissance. The Chateau de Chenonceaux has stone and brick exterior walls, symmetrical facades, a rusticated base, a central entrance arch, and rounded corners topped with pointed caps. Steeply pitched roofs with multiple dormers are fixed with fini-

als and cresting; similarities are strong. See: Sir Banister Fletcher, A History of Architecture ed. John Musgrave (London: The Royal Institute of British Architects and The University of London, 1987), 927.

¹¹⁹ "Chicago Skyscraper, Aged 35, Worth Less Than 0," New York Times 20 Feb. 1927: Sec. 1, col. 4.

¹²⁰ G.E. Kidder Smith, Architecture in America (New York: American Heritage Publishing Co., Inc., 1976), 1: 224.

¹²¹ Louis H. Sullivan, "The Tall Office Building Artistically Considered," in Kindergarten Chats and Other Writings, (New York: Dover Publications, Inc., 1979), 206. Originally published in *Lippincott's*, March 1896.

¹²² Charles K. Ramsey studied engineering at Washington University in St. Louis. Traveling in France in 1869, Ramsey pursued a "self-directed" architectural education. He began his own practice in St. Louis during the 1880's and became treasurer of the St. Louis Chapter of the American Institute of Architects in 1890, the year it was founded.

¹²³ Louis H. Sullivan, "XL On Scholarship," in Kindergarten Chats and Other Writings, (New York: Dover Publications, Inc., 1979), 130. Originally published in serial form in *Interstate Architect and Builder*, Feb. 16, 1901 – Feb. 8, 1902.

¹²⁴ The Fair Store was founded in 1875 by E.J. Lehmann. Though often remodeled and enlarged the Fair Store eventually evolved into an entirely new structure, the 1892 landmark featured here.

¹²⁵ Thomas E. Tallmadge, Architecture in Old Chicago (Chicago: The University of Chicago Press, 1941), 203.

¹²⁶ Louis H. Sullivan, The Autobiography of an Idea (1924; rpt. New York: Dover Publications, Inc. 1956), 316.

¹²⁷ Miles L. Berger, They Built Chicago Entrepreneurs Who Shaped A Great City's Architecture. (Chicago: Bonus Books, Inc., 1992) 272-273.

¹²⁸ William H. Birkmire, The Planning and Construction of High Office Buildings. (New York: John Wiley & Sons, 1898) 7.

¹²⁹ Researcher, Donald Hoffman, explains the Masonic Temple's height: "...an unprecedented height of twenty stories, 273 feet 4 inches to the coping and 302 feet 1 inch to the top of the skylight." See: Donald Hoffman, The Architecture of John Wellborn Root. (Chicago: The University of Chicago Press, 1973) 196. Even in this scenario the Masonic Temple falls short of both New York towers.

¹³⁰ John L. Stoddard, From the Atlantic to the Pacific An Illustrated Tour with Descriptions. (New York: The Saalfield Publishing Company, 1903), unpage.

¹³¹ Ten years later, Root's colleague, architect Daniel Burnham, introduced the "rippling concept" to the walls of New York's Flatiron Building...ten years later.

¹³² Francisco Mujica, History of the Skyscraper. (Paris: Archaeology & Architecture Press, 1929) 56.

¹³³ The Chicago Court House (John M. Van Osdel, et al) was a massive stone and brick pile, 337 feet long on Clark, 214 feet along Randolph Street, and standing 120 feet high. It had two "wings" four floors, fourteen elevators, and took seven years to construct, finishing in 1885. The east half contained county functions while the west side was dominated by city of Chicago offices.

¹³⁴ Architects of the earlier iteration (1872) were Frederick and Edward Baumann. Information at hand reveals that this six-story office building was severe with few admirable qualities.

¹³⁵ Later a fifteen-story bay was completed to the north enlarging the original footprint by some fifty feet along Seventh Street.

¹³⁶ A 1924 remodeling erased these windows as well as the original main entrance, and eight-foot-tall terra-cotta lions that stood sentry at the second floor corners. The circular windows were replaced with thoroughly boring units and their destruction was nothing short of tragic.

¹³⁷ Ada Louise Huxtable, Kicked A Building Lately (New York: Quadrangle Books / The New York Times Book Company, 1976), 8.

¹³⁸ G.E. Kidder Smith, A Pictorial History of Architecture In America (New York: American Heritage Publishing Co., Inc., 1976), vol. 1, 209.

¹³⁹ The Louve was executed in Paris by Visconti and Lefuel, 1850-1857.

¹⁴⁰ Walter was highly acclaimed and was appointed by President Lincoln to the post of Government Architect serving from 1851 through 1865.

¹⁴¹ All carvings and sculptures were executed by Scottish-born American, Alexander Milne Calder (1846-1923).

¹⁴² Though large, the Philadelphia City Hall could not contain all required, and expanding, city departments. In 1927, a fifteen-story, Italian Renaissance-inspired City Hall Annex was completed to the plans of architect Philip H. Johnson (1868-1933).

¹⁴³ G.E. Kidder Smith, The Architecture of the United States (Garden City, New York: Doubleday, 1981), vol. 1, 627.

¹⁴⁴ John Mass, "Philadelphia City Hall Monster or Masterpiece?" AIA Journal February 1965: 25.

¹⁴⁵ Architectural firm was Furness, Evans & Co., 1902, 1906, tower added 1913; demolished 1969.

¹⁴⁶ Louis H. Sullivan, "The Tall Office Building Artistically Considered," in Kindergarten Chats and Other Writings, (New York: Dover Publications, Inc., 1979), 208. Italics added.

¹⁴⁷ It must be pointed out that the Exchange's Trading Room was not located in the exact center of the building nor was it *immediately* behind the second floor windows (those within the arched openings). Quite frankly, exact locations did not matter, only the *idea of function* did.

¹⁴⁸ American Publishers Corporation, Chicago The World's Youngest Great City (Chicago: 1929), 186.

¹⁴⁹ Demolition for the Chicago Stock Exchange Building swept away the five-story, 101 foot square, Union Building (Wheelock and Thomas, 1873), described as "the telegraph headquarters of the West." This was important to Chicago because it housed the headquarters of the Western Union Telegraph Company, and from here was also dispatched the news from the Associated Press.

¹⁵⁰ The Exchange took possession of its offices and celebrated Trading Floor on April 30th, 1894, just hours before the building was opened to others and the public at large.

¹⁵¹ Robert Twombly, Louis Sullivan His Life and Work (New York: Viking Penguin Books, 1986), 313.

¹⁵² The LaSalle Building, also known as the Empire Block, was designed by architects Dixon and Hamilton. It measured forty feet on LaSalle Street, eighty feet on Madison Street, and it stood about 100 feet tall. The business building contained thirty office suites, five retail stores, and two passenger elevators. It was demolished in 1908 and was replaced by the twenty-three-story LaSalle Hotel.

¹⁵³ In the accompanying view of the Manhattan Life from the south showing Broadway, the Romanesque Revival structure to the lower right was the Consolidated Stock and Petroleum Exchange (E.D. Lindsay, 1888). This 6-story building is also long gone.

¹⁵⁴ Sigfried Giedion, Space, Time and Architecture (Cambridge: Harvard University Press, 1982), 385-386.

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- ¹⁵⁵ Thomas A. P. van Leeuwen, The Skyward Trend of Thought (Cambridge: The MIT Press, 1988), 21.
- ¹⁵⁶ Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 111.
- ¹⁵⁷ Still clouded in mystery: the reason for the name *Reliance*. The preponderance of skyscraper names in Chicago, at that time, referred to Indian tribes and chiefs, small romanticized New England towns, and locally-famous New England mountains. Of course the names of some industrialists and their companies also held sway, but to choose a noun over what could have been the "Hale Building" showed a degree of healthy panache...reliance.
- ¹⁵⁸ At the moment of the Reliance Building's completion it ranked only as the city's fifteenth tallest skyscraper (tied with the Manhattan and the Great Northern Hotel). The Reliance was not famous by virtue of its *height*, there were other virtues.
- ¹⁵⁹ Terra-cotta spandrel panels do offer decoration in the form of French Gothic detailing, quatrefoil tracery; Gothic-inspired banded columns present themselves at the junctures of the window frames. Though demur, these garnishes somewhat explode the idea of no historical trappings whatsoever on the Reliance's facades.
- ¹⁶⁰ "A White Enameled Building," The Architectural Record January-March 1895: 299-305.
- ¹⁶¹ The forty two-story First Wisconsin Center (Skidmore Owings & Merrill, 1973), rising 601 feet, eventually took the title.
- ¹⁶² This was not the first instance of a skyscraper being named after an explorer. Completed in Chicago, just two years before the Marquette, was the 14-story Columbus Memorial Building - known for its large bronze statue of Columbus above its entrance.
- ¹⁶³ Donaldson & Mier, 11 floors, demolished in 1956.
- ¹⁶⁴ D. H. Burnham & Co., Mason & Rice, fourteen floors, 221 feet tall, demolished in 1961.
- ¹⁶⁵ Louis H. Sullivan, Kindergarten Chats and Other Writings (1918; rpt. New York: Dover Publications, Inc., 1979), 206.
- ¹⁶⁶ Had he not died the "Guaranty" was to have been named the *Taylor Building* after its owner and financier.
- ¹⁶⁷ Le Corbusier, Towards A New Architecture (1931; rpt. New York: Dover Publications, Inc., 1986), 41.
- ¹⁶⁸ Atwood died before the Ellicott Square Building was completed.
- ¹⁶⁹ Charles Moore, Daniel H. Burnham Architect Planner of Cities (Boston: Houghton Mifflin Company, 1921), 85-86.
- ¹⁷⁰ Montgomery Schuyler, "The Works of R. H. Robertson," The Architectural Record Vol. VI, No. 2, October-December 1896: 219.
- ¹⁷¹ Office floors two through twenty originally contained thirty-six offices each, roughly measuring either nine by twelve, or nine by seventeen feet. By this count the building contained 684 independent offices.
- ¹⁷² William H. Birkmire, The Planning and Construction of High Office Buildings (New York: John Wiley & Sons, 1898), 20.
- ¹⁷³ Weber, after having arrived in Chicago from Germany in 1893, was employed as a draftsman in the office of Daniel H. Burnham. Weber left Burnham's employ in the early 1900's to begin his own firm having located his office in the Fisher Building.
- ¹⁷⁴ Other major New York structures Hardenbergh designed were the celebrated Dakota Apartment House (1884), Western Union Telegraph Building (1884), Astor Building (1885), Hotel Albert (1885), London and Lancashire Insurance Building (1890), Martinique Hotel (1897), Waldorf-Astoria Hotel (1897), and the venerable Plaza Hotel (1906).

¹⁷⁵ Atlanta's "Flatiron" predates New York City's far more celebrated counterpart by five years. Manhattan's is twice the height of Atlanta's and is triangular – closer to the utilitarian flatiron then found in every household.

¹⁷⁶ John Jacob Astor IV, the great-grandson of the family's founder, perished during the sinking of the liner Titanic on the night of April 15th, 1912.

¹⁷⁷The architectural firm of Skidmore, Owings & Merrill designed the Marine Midland at 52 floors, 688 feet tall.

¹⁷⁸ William Gray Purcell, Collection: William Gray Purcell Papers, ed. Mark Hammons, (University of Minnesota: Northwest Architectural Archives) [AR:B4d1.8].

http://www.organica.org/pejn230_1.htm 3/22/2004.

¹⁷⁹ Peter B. Wight, "Recent Improvements in Fire-Proof Construction at Chicago. The Ayer Building," The Brickbuilder Feb. 1899: 33-34.

¹⁸⁰ Ira J. Bach, Chicago on Foot, (Chicago: J. Philip O'Hara, Inc., 1973), 18.

¹⁸¹ Stanley R. McCormick was the youngest son of Cyrus Hall McCormick, the inventor of the reaper and the founder of the International Harvester Company of Chicago. Stanley married in 1904, and in 1906 was diagnosed as mentally ill – a victim of paranoid schizophrenia. He died in 1947.

¹⁸² Chicago Sunday Tribune, 7 Feb. 1909, advertisement.

¹⁸³ Lewis Mumford, The Brown Decades (1931; rpt. New York: Dover Publications, Inc., 1971), 70.

¹⁸⁴ Schlesinger & Mayer was founded in 1872 by German-born businessmen Leopold Schlesinger and Daniel Mayer. Their first mercantile building, of 1873, was completed to the plans of W.W. Boyington and stood on the southeast corner of State and Madison Streets.

¹⁸⁵ Scottish-born John Pirie and Irish-born Samuel Carson founded a dry goods store in La Salle, Illinois in 1855. During the Civil War, Carson and Pirie relocated to, and opened a wholesale store in, Chicago. Carson and Pirie brought to Chicago brothers George and Robert Scott, already managers of their downstate stores. Subsequently, Carson Pirie Scott & Company was organized ultimately becoming one of the most successful American enterprises of its kind.

¹⁸⁶ It is unclear why Louis Sullivan, who died in 1924, was not asked (or declined) to design the store's 1906 addition. In fact, Louis Sullivan never received a commission from Carson Pirie Scott & Company. All earlier work was only sponsored by Schlesinger and Mayer! This was Sullivan's last major (by size) commission.

¹⁸⁷ The Ivins Syndicate was only one such group of investors in New York. Capital was raised for costly projects (like skyscrapers), the money invested, the risk shared. Returns were more often than not quite lucrative.

¹⁸⁸ Montgomery Schuyler, "The Skyline of New York, 1881-1897," Harper's Weekly March 1899: 295.

¹⁸⁹ Architect was Thomas McBean.

¹⁹⁰ The dimensions were thirty-nine by twenty-seven by one-hundred-four by fifty-four by eighty-three feet.

CHAPTER FOUR: STEEL PENS AND STEEL PINS 1900-1919

¹⁹¹ International Correspondence Schools, A Textbook on Architectural Drawing (New York: Press of Eaton & Mains, 1901) 13,14.

¹⁹² Louis De Coppet Berg, "Iron Construction in New York City: Past and Future," Architectural Record April-June 1892: 448-469.

¹⁹³ John Taylor Boyd, Jr., "A New Emphasis in Skyscraper Design," *The Architectural Record* Dec. 1922: 496-509.

¹⁹⁴ Earle Shultz and Walter Simmons, *Offices in the Sky* (Indianapolis: Bobbs-Merrill Company, Inc., 1959), 58.

¹⁹⁵ "They Have a Unique Philosophy of Their Own That Helps Them Regard with Equanimity the Dangers of their Occupation," *New York Times* 7 June 1908: Part 5, 9, col. 1.

¹⁹³ Richard Hill, *Skywalkers A History of Indian Ironworkers* (Brantford, Ontario: Woodland Indian Cultural Education Centre, 1987), 19.

¹⁹⁷ Claude Bragdon, "Architecture in the United States III The Skyscraper," *The Architectural Record* Aug. 1909: 85-96.

¹⁹⁸ Earle Shultz and Walter Simmons, *Offices in the Sky* (Indianapolis: Bobbs-Merrill Company, Inc., 1959), 274.

¹⁹⁹ Francisco Mujica, *History of the Skyscraper* (Paris: Archaeology & Architecture Press, 1929), 51. Report cited: *Final Report of the Commission on Building Districts and Restrictions* dated June 2, 1916.

²⁰⁰ Postcard, handwritten message dated July 11th, 1907.

²⁰¹ Postcard, handwritten message dated December 7th, 1904

²⁰² Roger Shepherd, ed., *Skyscraper The Search for an American Style 1891-1941* (New York: McGraw-Hill, 2003) 169.

²⁰³ Schmidt, a Bavarian by birth, migrated with his family to America as an infant. He studied architecture at the Massachusetts Institute of Technology, and began his career as an architect in Chicago in 1887. He was awarded the Montgomery Ward commission, his first *large scale* project.

²⁰⁴ Louis Sullivan, *Kindergarten Chats and Other Writings* (1918; rpt. New York: Dover Publications, 1979), 21. Note: *Kindergarten Chats* first appeared in serialized form in 1901 as 52 articles that ran from February 16th, 1901, to February 8th, 1902, in *Interstate Architect*.

²⁰⁵ Adler & Sullivan with Charles K. Ramsey, 1892

²⁰⁶ The view of Broad Street looks north and dates from about 1905. The Curb brokers form the knot of humanity in the foreground. On the extreme right is the Broad Exchange Building. Background towers include, from the left, the Blair, Commercial Cable, Gillender, and Hanover National Bank. The porticos of the New York Stock Exchange and of the Sub Treasury (Federal Hall) are also prominent.

²⁰⁷ Henry Collins Brown, *Valentine's City of New York* (New York: Valentine's Manual, 1920), 108.

²⁰⁸ Paul Starrett, *Changing the Skyline* (New York: Whittlesey House, 1938), 88.

²⁰⁹ Glenn Collins, "A 100-Year View Of a Landmark Brushing the Sky," *New York Times* 30 September 2002: B1, col. 3.

²¹⁰ "The 'Flatiron' or Fuller Building," *Architectural Record* Oct. 1902: 528-36.

²¹¹ Early photographs reveal much about what the Flatiron's neighborhood was like in 1902. The accompanying *elevated* view, showing the confluence of Broadway and Fifth Avenue, captures two noteworthy dome-topped skyscrapers, both of which predate the Flatiron Building. Their appearance in almost every view of the landmark Flatiron is cause for recognition here. These still stand. Further south on Fifth Avenue, displaying a flag atop its broad dome, is the thirteen-story structure now simply known by its address: 141-147 Fifth Avenue. This early skyscraper was the product of the demolition and expansion of earlier commercial buildings at this site. Over the course of six years (1895-1900) the owners, Henry Corn and N. L. McCready, managed to raise a thirteen-story "single-structure" store and loft building. Architects involved with the design of the 141-

147 Fifth Avenue building were two prominent New Yorkers, Robert Maynicke and Henry Edwards Ficken. Their design was grounded in the French Beaux-Arts. The skyscraper rises as a wedding cake of white brick and terra-cotta. Its facades are replete with every type of Parisian design contrivance. No less than five cornices divide the tiers and floors eleven and twelve are wedged beneath a prominent mansard roof and metal dome. The other noteworthy domed skyscraper, on the west side of Fifth Avenue and to the right in this view, is a building also known by its address: 170 Fifth Avenue. Here is a twelve-story office block, a petite lady wearing white brick and limestone. This is a delicate creation with a Renaissance-inspired base complete with arches, pedimented windows and engaged Ionic columns. The 12th floor was squeezed into a mansard roof while a Baroque, eight-sided tower with a gold-covered dome, gently lifts its head above the roof. This superbly proportioned building was completed in 1898 from the drawings of architect Robert Maynicke. The 170 Fifth Avenue building humbly measures thirty-one feet along Fifth Avenue and 124 feet on Twenty-second Street. Throughout the century, this skyscraper has managed to retain its charming, but tiny, marble-walled lobby. And, as on its opening day, two elevators still slide from lobby to penthouse. At this writing this little skyscraper is slated not for demolition but for conversion to residential condominiums.

²¹² Paul Starrett, Changing the Skyline (New York: Whittlesey House, 1938), 62.

²¹³ To avoid confusion, Holabird & Roche was responsible for a "Champlain" Building that was erected in 1894; this one is often referred to as the "first Champlain." The Powers Building was renamed sometime after 1903 – its completion date – and is simply known as the "second Champlain." All doubt is removed when "Powers" is used for the "1903" structure.

²¹⁴ Outside of the United States too, architects were experimenting with high-strength concretes for tall buildings. The Ingalls Building was the first concrete-skeleton skyscraper in America, but certainly not the last, here or elsewhere. The late-1920's saw the Hotel Palacio Salvo constructed in a similar manner in Montevideo, Uruguay, no less. This celebrated hotel rose twenty-two floors, 331 feet into the sky and was proclaimed "the tallest reinforced concrete building in the world" (Onderdonk, 1998, p. 11). Though somewhat preposterous looking, this skyscraper, designed by architect Mario Palanti, briefly established a record-holding-height building outside America.

²¹⁵ Louis H. Sullivan, Kindergarten Chats and Other Writings (1918; rpt. New York: Dover Publications, Inc., 1979), 39.

²¹⁶ Euclid Avenue's turn-of-the-century moniker was "Wall Street of Ohio's metropolis."

²¹⁷ Benes was born in Prague, Bohemia, and arrived in America in 1866. Little is known about Hubbell.

²¹⁸ Though Benes died in 1935 the firm continued in name only until 1939.

²¹⁹ The renovation architect was Robert C. Gaede.

²²⁰ Elmer Davis, History of the New York Times 1851-1921 (New York: New York Times, 1921), 326.

²²¹ Giotto, et al, 1334-59.

²²² Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 176.

²²³ Carl W. Condit, The Chicago School of Architecture (Chicago: The University of Chicago Press, 1964), 112-113.

²²⁴ Architects for the latest iteration: Perkins and Will Partnership and C.F.Murphy Associates.

²²⁵ "Buffalo 1908 A History of the City of Buffalo." The Buffalo Evening News Buffalo 1908, 103.

²²⁶ Completed in 1973, this ten-year construction project was designed and managed by architects Minoru Yamasaki & Associates and Emery Roth & Sons.

²²⁷ Ernest Flagg, forty-seven stories, 612 feet tall, 1908.

²²⁸ Richard Morris Hunt, 1876. The Coal and Iron Exchange stood on the southeast corner of Trinity Place and Cortlandt Street until 1906.

²²⁹ Henry Alexander Horwood, "New Sky-Scrapers For New York," Metropolitan Magazine Jan. 1907: 461-469.

²³⁰ Skidmore, Owings, & Merrill, 1974. This building is the New York home of U.S.X. (formerly known as U.S. Steel Corporation) and rises fifty floors, 743 feet.

²³¹ This message appears on the reverse of a postcard dated June 10th, 1908. The title on the obverse reads: "Singer Building the highest Building in the world."

²³² Singer Sewing Machine Co., Inc. Machine Sewing A Treatise on the Care and Use of Family Sewing Machines (New York: Singer Sewing Machine Co., Inc., Singer Building, 1923), Preface.

²³³ Architects of One Liberty Plaza: New York office of Skidmore, Owings, and Merrill. This fifty-four story, 743-foot-tall structure was completed in 1969.

²³⁴ "Before This Seven-Day Wonder in Construction is Completed It will Be Overtopped by the Tall Tower of the Metropolitan Life," New York Times 29 December 1907: pt. 5, 5, col. 1.

²³⁵ The Candler Building, (Atlanta: CokerGolley Ltd., 1906), rpt. 1995, 18. real estate prospectus.

²³⁶ Baltimore Sun, 24 June 1906, 1.

²³⁷ The American Surety Building (Bruce Price, 1894) is a particularly fine example.

²³⁸ Lion heads were a favorite of bankers, they represented strength, fidelity, tenacity, and prestige; after all, these were the "king of beasts," the lions too.

²³⁹ Montgomery Schuyler, "Some Recent Skyscrapers" The Architectural Record Vol. XXII, September, 1907: 174-175.

²⁴⁰ "The Old National's 15 Story Skyscraper," The Spokesman-Review 6 November 1910: Building Section.

²⁴¹ American Publishers Corporation, Chicago The World's Youngest Great City. (Chicago: 1929), 124.

²⁴² At times the building was also known as the Emerson Tower.

²⁴³ Florence, Italy's Gothic town hall. Its construction dates from 1298 to 1344. This building is essentially a brick box topped by a tall (308 feet), battlemented, clock / observation tower.

²⁴⁴ "New Bankers' Trust Company Tower Sets Building and Realty Records," New York Times, 10 April 1910: pt. 8, 6, col. 3.

²⁴⁵ Daniel Boorstin, The Creators (New York: Random House, 1992), 546.

²⁴⁶ For details of Woolworth and his commercial beginning see Celebrating 60 Years of An American Institution F. W. Woolworth.

²⁴⁷ Victoria Tower (Sir Charles Barry and A. W. N. Pugin, 1836-1868) in London stands 336 feet tall, less than half the height of the Woolworth Building.

²⁴⁸ By no means is Cass Gilbert's design for the Woolworth Building anything less than brilliant.

His borrowings from the Victoria Tower were superficial, nothing more. The technical requirements borne by American architects, engineers, contractors, and hundreds of subcontractors, suppliers, and consultants were substantially more difficult than those for Victoria Tower. In this author's opinion, Gilbert's "facadism" – or direct borrowing - in no way diminishes the boldness and shear beauty of his scheme.

²⁴⁹ John P. Nichols, Skyline Queen and the Merchant Prince (New York: Pocket Books, a Simon & Schuster division, 1973), 93.

²⁵⁰ Margaret Heilbrun, ed. Inventing the Skyline the Architecture of Cass Gilbert, (New York: Columbia University Press, 2000), 121.

²⁵¹ Louis J. Horowitz and Boyden Sparkes, The Towers of New York The Memoirs of a Master Builder (New York: Simon and Schuster, Inc., 1937), 109.

²⁵² "Woolworth Building Will Be World's Greatest Skyscraper" New York Times 7 May, 1911: Sec. 8, 1, col. 3.

²⁵³ John P. Nichols, Skyline Queen and the Merchant Prince (New York: Pocket Books, a Simon & Schuster division, 1973), 100.

Despite Woolworth's calculations, basements and sub-basements *do not count*, and never did when recording the height of a skyscraper, or any building for that matter. Officially, the building stands fifty-five floors, 750 feet tall as measured from the sidewalk at the building's main entrance to the top of the highest integral piece of the building.

²⁵⁴ Originally, the entire executive offices of the F. W. Woolworth Company were accommodated on just two floors of the fifty-five! The remaining floors were filled with hundreds of "high-rent" paying tenants.

²⁵⁵ Despite the ending of the war over a half-century ago the observatory has remained closed. In this author's opinion its reopening should not be further delayed. The Woolworth Building is both an historic landmark and a superb example of American architecture, and as such, it should be more accessible to the public.

²⁵⁶ Advertisement on obverse of postcard image of Woolworth Building, c.1913.

²⁵⁷ The Staats-Zeitung Building (William Schickel, 1873) was a very early skyscraper. It stood five floors, was topped with a mansard roof, and was somewhat overlooked, as it was a contemporary of the more "noticed" Equitable Building a few blocks west.

²⁵⁸ Auto passage through the Municipal Building is, unfortunately, no more. Traffic is now rerouted *around* the building.

²⁵⁹ Refer to the entries submitted by B. Bijvoet, Duiker, and Max Taut, and especially that of Walter Gropius and Adolf Meyer. See Chicago Architecture 1872-1922 Birth of a Metropolis (Prestel 310-311).

²⁶⁰ Architects were Cesar Pelli, with Adamson Associates, completed 1985.

²⁶¹ Louis J. Horowitz and Boyden Sparkes, The Towers of New York The Memoirs of a Master Builder (New York: Simon and Schuster, 1937), 125.

²⁶² Henry Collins Brown, Valentine's Manual of Old New York (New York: Valentine's Manual, Inc., 1920), 357-358.

²⁶³ Paul Goldberger, The Skyscraper (New York: Alfred A. Knopf, 1981), 49.

CHAPTER FIVE: ECLECTICISM AND THE ROARING TWENTIES 1920-1929

²⁶⁴ This Warner Brothers Pictures, Inc., a 1927 release, lasted one hour and twenty-nine minutes during which 280 words were spoken to the delight of the audience; this was the very first talking motion picture (partially). Incidentally, the movie shows Times Square at night with the Paramount Building's clock and rooftop glass sphere lighted in the background.

²⁶⁵ There also were many more skyscrapers *outside* the confines of the Loop.

²⁶⁶ "Huge Beacon Turned on Atop Hotel St. George; Rays Are Visible 50 Miles on Clear Nights," New York Times 25 Feb. 1928: 19, col. 4.

²⁶⁷ The New York World, The World Almanac and Book of Facts (New York: The World, 1929), 538.

²⁶⁸ "Office Building to be World's Tallest," New York Times 17 June 1928: Sec. II, 2, col. 6.

²⁶⁹ "On the Palisades of New Jersey," New York Times 16 January 1927: Sec. 1, 4.

²⁷⁰ "New York Possesses 50% of Skyscrapers," New York Times 2 July 1929: 49, col. 4.

²⁷¹ On each of the tower's four sides is a clock face that measures 19'-7" with an hour hand measuring 6'-4" and a 9'-2" minute hand. Originally these hands were of redwood and only in 1995 were they replaced with "aircraft-grade aluminum." The clock base is 300 feet above the sidewalk and it occupies space at the 24th and 25th floor levels.

²⁷² Emery Stanford Hall, ed., Handbook for Architects and Builders (Chicago, IL: Illinois Society of Architects, 1922), back cover advertisement.

²⁷³ Ron Chernow, Titan The Life of John D. Rockefeller, Sr. (New York: Vintage Books, 1999), 222.

²⁷⁴ Chernow 222.

²⁷⁵ Henry Collins Brown, Valentine's City of New York (New York: Valentine's Manual, Inc., 1920), 67-69. Italic added.

²⁷⁶ Peabody & Stearns, 1915

²⁷⁷ The previous record holder was Fort Worth's Transport Life Building (1921) by architects Mauran, Russell & Crowell, with Sanguinet and Staats. It still stands at 24 floors, 307 feet.

²⁷⁸ Fiske Kimball, "Recent Architecture in the South," The Architectural Record March, 1924: 229.

²⁷⁹ The original Pegasus sign was installed and lighted on the evening of November 12, 1934. The version there now is the second.

²⁸⁰ The building stands 260 feet, but with the rooftop "monument" an integral part of the whole building, it reaches a total 325 feet.

²⁸¹ The reference to the "sacred things of the city" has spoken to generations of Chicagoans who, through the erection of some of the most compelling skyscrapers anywhere, have indeed left "this city no less nobler" and certainly more beautiful than it was when the London Guaranty was completed.

²⁸² Bishop, Glenn A., and Paul T. Gilbert. Chicago's Accomplishments and Leaders (Chicago: Bishop Publishing Company, 1932), 26-27.

²⁸³ Since the 1950's much of this country's furniture industry has relocated to the South leaving the Mart with a questionable future. In the 1990's the Mart was transformed by a real estate consortium into a residential condominium building.

²⁸⁴ Ibid. 27-28.

²⁸⁵ Evidently there was no place here for any steel and leather chairs, no bleached wood tables, no slabs of glass floating upon metal legs. Absent was streamlined furniture, period. Curiously, Chicago prided itself in its modernity, and yet, its own American Furniture Mart seemed to largely eschew the modern aesthetic.

²⁸⁶ Only Europe's tallest steeples could compare to the Chicago Temple's steeple that tops out at 569 feet. The contenders were / are: *Ulm Munster*, in Ulm, Germany stands at 528 feet; *Cologne Cathedral*, Cologne, Germany rises to 515 feet; *Notre Dame*, Rouen, France rises 495 feet; *Strasbourg Cathedral*, Strasbourg, France stands 475 feet.

²⁸⁷ In 1924 the only skyscrapers that were taller than the Chicago Temple Building were the Woolworth (792 feet), Metropolitan Life (700 feet), and Singer (612 feet) buildings in New York.

²⁸⁸ The ability of Chicago's pedestrians of the 1920's to spot and unravel the meaning of the "hive" some four-hundred feet in the air is somewhat doubtful. Still, as an object, it is

too romantic to ignore and has added wonder and amazement to those familiar with the symbolism – and the building.

²⁸⁹ The concept of perseverance has special meaning when associated with bison, especially during the 1920's. At that time America's bison were virtually extinct, the result of decades of mass slaughter. Since then the conditions and outlook for the bison have improved.

²⁹⁰ Inscription found in the *Hall of Inscriptions*, Tribune Tower lobby, south wall, east half.

²⁹¹ John Ruskin, The Seven Lamps of Architecture (Boston: Dana Estes & Company, publish date unknown, *The Lamp of Sacrifice*, 31).

²⁹² Close contenders then were *New York Times Tower* (25 floors, 363 feet), *New York World* (16 floors, 309 feet), *New York Tribune* (9 floors, 260 feet), the old-*New York Times* (13, 240 feet), and San Francisco's *Call Building* (16 floors, 315 feet). Howells and Hood would collaborate again, this time for another "newspaper skyscraper," *New York's Daily News Building* (1930) which rose 36 floors, 476 feet.

²⁹³ "\$100,000.00 In Prizes To Architects" *Chicago Daily Tribune* 10 June 1922.

²⁹⁴ But one must remember, Howells and Hood's entry was judged best of those viewed by judges whose architectural credentials were largely unknown. Clearly, of the 263 entries received fifty-nine were dismissed as late – some 22 percent. Biases, prejudices, and simple ignorance always play a role in all architectural competitions, and sometimes judges are selected by virtue of their social status and the status of their bank account and not because of their profound insight regarding architectural design. With the Tribune Tower competition some resentment surfaced, mostly by "modernists" at the thought of having to look at Chicago's skyline with so prominent a Gothic tower in its midst. Louis Sullivan recoiled at the winning entry and termed it a "monster."

Other meritorious submissions were by Finnish architect Eliel Saarinen, second place, awarded \$20,000; third place and \$10,000 was garnered by Chicago architects Holabird & Roche.

²⁹⁵ The Prudential Building was both an investment property and the regional offices of the Boston-headquartered insurance company. The Prudential Building was designed by the Chicago firm of Naess and Murphy and completed in 1958. It stands forty-one floors, 601 feet tall.

²⁹⁶ Thomas W. Palmer, The City of Detroit Michigan 1701-1922 (Detroit: S.J. Clarke Publishing Company, 1922), 464.

²⁹⁷ Carleton Knight III, "Significant Clients: Ma Bell Builds Big," *Architecture* July 1983: 60-75.

²⁹⁸ The rentable area of this building was 850,000 square feet, gigantic by 1926 standards.

²⁹⁹ Robert Sharoff, "What's Up There?" *Chicago Tribune* 23 July 1995: Chicago Tribune Magazine, 19.

³⁰⁰ John Albury Bryan, ed., Missouri's Contribution to American Architecture (St. Louis: St. Louis Architectural Club, 1928) 329.

³⁰¹ The building was renamed years later as the North American Tower and is now simply known by its address, 35 East Wacker Drive.

³⁰² The thirty-three story Savoy-Plaza Hotel replaced the earlier fifteen story Hotel Savoy designed by architects Hume & Townsend and completed in 1892. In turn, the romantic Savoy-Plaza was demolished in 1964, and was replaced by the fifty-story, 705-foot tall General Motors Building designed by Edward Durell Stone and Emery Roth & Sons and completed in 1968.

³⁰³ Lee Stratton, "Life on Sampson Avenue" *The Columbus Dispatch* 11 July 1999. Lee Stratton recounts the memories of William Field, born 1915.

³⁰⁴ Ohio Historical Society. Ohio History The Scholarly Journal of the Ohio Historical Society, 1998, Vol. 37, pg. 135, "Ohio's Tallest Building The A.I.U. Citadel, at Columbus." [Online] Available <http://www.ohiohistory.org/ohstemplate.cfm> December 22, 2007.

³⁰⁵ Ohio Historical Society 138.

³⁰⁶ The Northwestern Terra Cotta Company, advertisement, Sweet's Architectural Catalogue 1927 28, Section A, A347.

³⁰⁷ The Chicago Temple Building (Holabird & Roche, 1923) officially stood at 556 feet, just one foot shy of the Pittsfield. The crown was passed to the new upstart only to have it wrested away by the 605-foot-tall Chicago Board of Trade (Holabird & Root, 1930). One could conclude that this tourney began, on this site, in 1870. An early business block, the Drake-Farwell Building, stood on the site of today's Pittsfield Building. The Drake-Farwell was a noteworthy structure being a lofty (for then and there) seven stories and standing in what some considered a "frontier town." It was constructed in 1870 according to plans prepared by one of Chicago's most celebrated early architects, John M. Van Osdel. In that same year the Drake-Farwell burned so completely that its salvage was impossible; its destruction by fire predated the Great Fire of 1871 in which case it would have been utterly destroyed in *that* conflagration.

³⁰⁸ I do not want to give the impression that the Chicago "L" no longer operates, it does, but now it rumbles and screeches.

³⁰⁹ Lower floor plates measure approximately 15,000 square feet; upper tower floor plates measure a cozy 3,600.

³¹⁰ As a rule doctors, dentists, optometrists, and other health care professionals don't require vast contiguous office areas, they gravitate to structures where smaller floor plates are the norm. The Pittsfield Building's profile is relatively thin. Consequently, it continues to serve those in the health fields. The jewelry industry has relatively the same requirements.

³¹¹ In 1928 the Chicago Temple building stood at 21 floors, 556 feet as completed in 1923. It did hold the honor of Chicago's tallest by virtue of overall height, but it fell 21 floors short of the Mather Tower which held the record *in number of floors*.

³¹² Binnol, Rebecca. "and the award goes to...the Penobscot Building." *Detroit Area Art Deco Society The Modern Spring 2000* Vol. 14 No. 1. 24 March 2004

<<http://www.daads.org/modern/1401/penobscot.htm>>. From a promotional brochure of the Penobscot Building.

³¹³ Renaissance Center's cylindrical centerpiece, the seventy-three story, 739-foot Westin Hotel took the honors in that year.

³¹⁴ With the Penobscot at 557 feet the only taller buildings were the Woolworth at 792 feet, the Metropolitan Life Building at 700 feet, and the Singer at 612 feet tall.

³¹⁵ This mast is *not* included in the height figure of 557 feet. From sidewalk to mast top is 657 feet.

³¹⁶ Hugh Ferriss (1889-1962) was America's preeminent artist of the country's metropolises and the great skyscrapers built therein. Ferriss' expressive chiaroscuro drawings captivated the nation and were widely published in architectural periodicals, books, and various magazines - especially throughout the 1920's. Mostly Ferriss was a freelance renderer but also worked as a resident delineator in many large architectural firms.

³¹⁷ Now known as the Chevron Building, this Art Deco tower was completed in 1929, standing thirty-seven floors, 428 feet tall. Architects were Alfred C. Finn, Kenneth Franzheim, and J.E.R. Carpenter.

³¹⁸ Earle Schultz and Walter Simmons, Offices In The Sky (Indianapolis: Bobbs-Merrill Company, Inc., 1959), 270. A brief profile of the Esperson's involvement in Houston is offered here.

³¹⁹ New York's Standard Oil Company was completed in 1926 making Houston's Esperson a close cousin architecturally. Both skyscrapers were erected by oil interests and both featured a symbolic temple top among other borrowings.

³²⁰ *Ibid.* 270.

³²¹ Mellie Esperson insisted that the "1928" building be air conditioned, and so it was in 1938. The Mellie Esperson Building included air conditioning *with its construction*. These were pioneers in this respect, early examples of central air conditioning in skyscrapers.

³²² The Architectural Record December, 1928: 40. National Tube Company, Pittsburgh, Pa., advertisement.

³²³ The Architectural Record November, 1928: 111. Carnegie Steel Company, Pittsburgh, Pa., advertisement.

³²⁴ In actuality San Francisco's Call Building and other shorter skyscrapers were laid waist to by the fires that raged *after* the initial 1906 earthquake. Certainly one could reason that even two-story-tall structures were likewise damaged but were not outlawed in favor of a city of only one-story buildings.

³²⁵ Zacharias, Pat. "Guardian Building has long been the crown jewel in Detroit skyline" *The Detroit News* 10 March 2001. 24 March 2004

<<http://www.detnews.com/history/guardian/>>. Frank W. Blair, bank president, explaining the virtues of a "colorful" skyscraper.

³²⁶ An obvious referral to the Woolworth Building's label "the Cathedral of Commerce" of a generation earlier.

³²⁷ An international philanthropic organization founded in 1872 by two American's who were Masons, Walter M. Fleming and William J. Florence. In 1990 Shriner membership worldwide stood at 885,000.

³²⁸ David Lowe, Lost Chicago (Boston: Houghton Mifflin Company, 1975), 216.

³²⁹ The John Hancock Center, designed by Skidmore, Owings and Merrill and completed in 1968, was the world's second tallest building, New York's Empire State Building being first. The Hancock Center stood 1,107 feet tall, not counting its twin transmitting towers.

³³⁰ New York Central Building, "At The Gateway To A Continent," 1929: 3-4.

³³¹ The Foshay Tower remained the tallest building in Minnesota until 1971 when the IDS Center, designed by Philip Johnson & John Burgee, was completed at fifty-seven floors, 772 feet.

³³² "Will Have Aerial Beacon," New York Times 28 Oct. 1928: Sec. XII, 12, col. 2.

³³³ Chanin Construction Company, Inc., advertising brochure, 1929.

³³⁴ Chanin Construction Company, Inc., advertising brochure, 1929.

³³⁵ Herbert M. Johnson, ed., Chicago The World's Youngest Great City (Chicago, IL.: American Publishers Corporation, 1929), 67.

³³⁶ The Chicago Opera House Block (Cobb & Frost, 1885) was Chicago's first (and only other) opera house / office skyscraper development. This pioneer was a metal-framed, brick-and-glass-faced structure that stood ten floors (130 feet) tall. It housed a large auditorium, 240 business offices, and it was served by four passenger elevators. It stood four blocks east (southwest corner of Clark and Washington) of the Civic Opera Building site until demolished in 1920. It is probable that the opera company did not own this building but was instead a tenant that rented from a real estate investor(s).

³³⁷ The eighteen-story Auditorium Building (Louis Sullivan, 1889) was a skyscraper that also housed an opera company, and in this sense, was not unlike the seven-story Metropolitan Opera House (J.S. Cady, 1883) in New York City. Hence, the marriage of opera and office was not unique - only the buildings grew taller.

³³⁸ The Central Union Block was indeed an important fixture in downtown Chicago. It was completed in 1890 to the designs of L.G. Hallberg and stood six-stories tall. It was a

"fine brick and stone edifice" that measured 220 feet on Wacker Drive and 180 feet on Madison Street. It contained twelve retail stores, 622 offices, four passenger elevators, and daily housed some 1,900 occupants who were "engaged in various industries and trades." It was pulled down in 1926. Its significance was that it helped to "set the stage" for even larger and taller buildings to come – giants with many elevators, diverse functions and large tenant populations.

³³⁹ The 555-foot height of the Civic Opera Building "matches" that of the Washington Monument (1885). Though often quoted, the Monument really stands 555 feet, 5 1/8 inches. Inches are not readily available for the exact height of the Civic Opera Building. Yes, in round terms they are equal.

³⁴⁰ The architectural firm of Skidmore, Owings & Merrill designed this skyscraper that stands at forty-eight floors, 663 feet tall.

³⁴¹ Directly across Michigan Avenue from the Carbide and Carbon Building is Boulevard Towers (Fujikawa, Johnson & Associates, mid-1980's). This cluster of three Miesian skyscrapers features black metal skins and darkly tinted windows. Though harmonious only by color, these produce a foil by which to critically judge the merits of the Carbide and Carbon Building some three generations after its completion.

³⁴² At the time of this skyscraper's construction the Burnham Brothers was perhaps the most prominent architecture firm in Chicago. From 1929 to 1933 it was headed by the sons of Daniel Hudson Burnham (1846-1912) founder of the architecture dynasty begun as Burnham & Root in 1873. Hubert (1882-1961) and Daniel Hudson Jr. (1886-1961) were the chief designers of the Carbide & Carbon Building.

³⁴³ Like New York's Woolworth Building (Cass Gilbert) constructed only sixteen years earlier, the short side of a rectangular office block supports a squarish tower. Both the Carbide and the Woolworth lifted far higher a chamfered, setback tower with a very decorative cap. The Woolworth too, was at the forefront of skyscraper development, and it also rose on that city's main street (Broadway).

³⁴⁴ The massing of the base and tower recalls that of the just-completed forty-two story Mather Tower (Herbert H. Riddle, 1928) some ten blocks to the east. It, too, is neo-Gothic.

³⁴⁵ Liu, Lara Becker. "Worker sees his "Wings" up close." *Democrat and Chronicle* 29 May 2003. 30 March 2004

<http://www.democratandchronicle.com/news/forprint/0529story16_news.shtml>. Personal recollections of 89-year-old Phil Interlicchia, fabricator of the skyscraper's rooftop wings.

³⁴⁶ Amy H. Croughton, "New Building to be Highest in Rochester," *Rochester Times Union* 27 June 1929.

³⁴⁷ Amy H. Croughton, "Banking Quarters of Genesee Valley Trust Open Monday," *Rochester Times Union* 29 September 1930.

³⁴⁸ Walter Raymond Agard, *The New Architectural Sculpture* (New York: Oxford University Press, 1935), 48.

³⁴⁹ Ada Louise Huxtable, *Kicked A Building Lately?*, (New York: Quadrangle/The New York Times Book Co., Inc., 1976) 213.

³⁵⁰ The Chicago firm of Vitzhum & Burns practiced for forty years, 1916-1956.

³⁵¹ "Hood," *The Architectural Forum* Feb. 1935: 126-133.

³⁵² Dover Publications, Inc. *Kindergarten Chats and Other Writings Louis H. Sullivan* (New York: Dover Publications Inc., 1979), 206.

³⁵³ This skyscraper was named for James Grant, a soldier who led the struggle to oust the French from Fort Duquesne (present day Pittsburgh) in 1758.

³⁵⁴ Selwyn, Edgar, dir. *Skyscraper Souls*. With Warren William, Maureen O'Sullivan, and Hedda Hopper. MGM / UA, 1932. From the book *Skyscraper* by Faith Baldwin.

³⁵⁵ "Wall Street Building May Go Up Sixty-four Stories," New York Times 8 April 1929.

³⁵⁶ American Publishers Corporation, Chicago The World's Youngest Great City (Chicago, 1929), 184.

³⁵⁷ William B. Crawford Jr., "The Lords of Trade," Chicago Tribune 22 March 1992: Chicago Tribune Magazine, col. 1, 13. Crawford continues: "...these exchanges provide the city with a powerful economic shot in the arm, employing 110,000 persons, generating \$11 million in annual property taxes and triggering an additional \$1 billion yearly in spending on exchange-related goods and services."

³⁵⁸ Frank A. Randall, History of the Development of Building Construction in Chicago (Urbana: The University of Illinois Press, 1949), 155.

³⁵⁹ The Board of Trade Building's tower was unfortunately brought down sometime around 1895. Apparently, settlement problems beneath the tower were alarming enough for this major surgery. Although somewhat top-heavy and clumsy looking (judged by today's "standards") this tower did indeed hold the record as Chicago's tallest building. This tower was an integral component of the entire design and its loss was unfortunate – especially only ten years after its construction.

³⁶⁰ 1, *Ibid.*, 185.

³⁶¹ Parenthetically, the English word "cereal" is derived from this mythological goddess, Ceres.

³⁶² Claude A. Welles, "Merchandise Mart Will Be The World's Largest Building," in Chicago The World's Youngest Great City. (Chicago: American Publishers Corporation, 1929), 141-142.

Welles was the Merchandise Mart's first General Manager. Italicized added.

³⁶³ Marshall Field & Company would come to occupy about half that space originally anticipated. At any rate, it was the Company's wish for consolidation of warehouse locations throughout the city that allowed for the wonton destruction of its celebrated "granite box" the Field Wholesale Store (H.H.Richardson) of 1886. Adding insult to injury, that landmark was replaced with a parking lot.

³⁶⁴ James Simpson, the president of Marshall Field & Company and architect Ernest Graham of Graham, Anderson, Probst & White did the honors of turning the first shovel at the groundbreaking ceremony.

³⁶⁵ Wall murals by artist Jules Guerin adorn the lobby and suggest themes of trade, industrialization, transportation, and worldwide cooperation.

³⁶⁶ The Medinah Club Building was completed in 1929 and rose forty-two floors, 471 feet.

³⁶⁷ The Netherland Hotel opened in 1932, held 800 rooms, and rose thirty-one stories, 372 feet.

³⁶⁸ As a direct result of the Stock Market Crash of October, 1929, budgets were revised. An exterior cladding of limestone was replaced with less costly yellow brick.

³⁶⁹ Chrysler Tower Corporation, The Chrysler Building (New York: 1930), unpagged brochure.

³⁷⁰ E.Y. "Yip" Harburg / Jay Gorney, Brother, Can You Spare a Dime?, from the 1932 Broadway musical *New Americana*.

³⁷¹ The Chrysler Building

³⁷² Oris P. Van Sweringen (1879-1936) and Mantis J. Van Sweringen (1881-1935) were first residential real estate men having developed numerous suburban tracts. They also acquired control of the Nickel Plate Railroad, hence the rail component in the Terminal Tower development.

³⁷³ Terminal Management, Inc., The Terminal Tower Observatory, c.1988.

¹ Lincoln Building, Robert H. Robertson, 1887.

² The Lincoln Building and its neighbors to the left, the six-finial-topped Lefcourt Colonial Building (Charles F. Moyer, 1929) and the hip-roofed Ten East Fortieth Street Building (Ludlow & Peabody, 1928) exhibit vast windowless areas. Other skyscrapers might have occupied the adjacent parcels and obliterated whatever views the occupants of these buildings had. In anticipation, elevator shaft ways were located on the end walls; floor plates of contiguous space were often the result.

³⁷⁴ The Waldorf-Astoria is indeed large and does fill the block bordered by Park and Lexington Avenues, Forty-ninth and Fifty-first Streets on Manhattan's east side. Its footprint: 81,405 square feet.

³⁷⁵ In the spring of 1975 the Detroit Plaza Hotel, in that city's Renaissance Center, was completed and proclaimed the world's tallest hotel. Officially it stands at 73 floors, 739 feet tall. Its architect was John Portman (b.1924) & Associates of Atlanta.

³⁷⁶ Early skyscraper candidates, for example, could be the American Surety Building (85 by 86 feet), American Tract Society Building (101 by 125 feet), and the Netherland Hotel (100 by 125 feet).

³⁷⁷ Paul Starrett, Changing The Skyline (New York: Whittlesey House, a McGraw-Hill Book Company, Inc., 1938), 303. Starrett Brothers and Eken was the general contractor for the Empire State Building. Starrett was the premier builder then in New York City having erected many skyscrapers there, and throughout the country.

³⁷⁸ The Empire State Building's footprint measures 198 feet north-to-south (Fifth Avenue) by 425 feet east-to-west (33rd and 34th Streets). The Waldorf-Astoria was not the only structure felled; It was the most famous demolished, but the hotel was only one of a half dozen or more structures removed from the site.

³⁷⁹ "Empire State Wins Architects' Award" New York Times 22 April 1931: 1, 18, col. 2.

³⁸⁰ In 1932, the first full year of operation, the Empire State Building's observatories drew over one million guests. Ticket prices, together with the purchasing of souvenirs, helped fill the coffers. As an aside, baseball's first place New York Yankees reported attendance figures for 1932 at 962,320 (New York Yankees: 1993 New York Yankees Guide, p.13). The Empire State Building's observatories were, and are still, immensely popular counting some 2 ½ million visitors yearly.

³⁸¹ This rooftop addition would have surpassed the height of many pioneer skyscrapers.

³⁸² Strengthening the steel framework in the building's core, combined with the stiffening of the steel in the mast, it was determined that the mast could resist a fifty-ton pull by any airship. The mooring mast cost \$750,000 to erect.

³⁸³ The airship's coupling was married to the building's mast, but the mast's coupling was attached to a giant revolving ring that girded the mast's cap (top). The dirigible could sway back and forth, and those hearty enough could travel into, and out of, the dirigible at will.

³⁸⁴ "Moors To Empire State" New York Times 16 September 1931: Sec. 1, 6, col. 6.

³⁸⁵ "Blimp Fails To Moor Here" New York Times 1 October 1931: Sec. 1, 29, col. 7.

³⁸⁶ Compare Shreve, Lamb & Harmon's *500 Fifth Avenue* also of 1930.

³⁸⁷ Located in the Garment District, the Empire State's tenant roster contains many firms involved in the fashion and garment industry.

³⁸⁸ Henry Collins Brown, Valentine's City of New York (New York: Valentine's Manual, Inc., 1920), 84. Though penned a decade earlier (1920), the Irving Trust Building has always contributed "dignity" and an "imposing character" to narrow and crooked Wall Street.

³⁸⁹ New York Times 3 March 1931: 60, col. 3. This newspaper advertisement appeared one day after the official opening of 500 Fifth Avenue.

³⁹⁰ Five Hundred Fifth Avenue's form, affected by zoning restrictions, was also influenced by context. It was undoubtedly conceived to be harmonious with the thirty-two-story building immediately to the west, the Salmon Tower (York & Sawyer, 1927).

³⁹¹ Apple, R.W. Jr. "Where a Sense of Place is Still Cast in Stone." New York Times 28 August 1998. 16 April 2004 <http://www.manchesterhouse.com/APPLE-BU.htm>. Quoted from City Hall architect John J. Wade.

³⁹² By a scant ten feet the *Alfred E. Smith State Office Building* in Albany was taller.

³⁹³ Gilbert Keith Chesterton (1874-1936).

³⁹⁴ Venturi, Robert, Complexity and Contradiction in Architecture. (New York: The Museum of Modern Art, 1966), 86.

³⁹⁵ Ada Louise Huxtable, The Tall Building Artistically Reconsidered: The Search for a Skyscraper Style. (New York: Pantheon Books, 1982), 46.

³⁹⁶ Philadelphia's tallest building then was its City Hall, 547 feet tall.

³⁹⁷ The leg of the T measures roughly 164 by 134 feet and is wrapped with ribbon windows.

³⁹⁸ The Philadelphia Savings Fund Society has not occupied this skyscraper for decades, yet its giant letters did glow until recently. At this writing these landmark letters might be re-lighted as they were, and still are, an important Philadelphia landmark.

³⁹⁹ The first recording of any skyscraper to be air conditioned involved the twenty-one story *Milam Building* in San Antonio, Texas. Though slightly smaller (247,779 s.f.) and shorter than the PSFS Building, "It was the first air conditioned office building in the world with the air conditioning a part of the original construction." (Italics added) Joseph Nathan Kane, Famous First Facts (New York: The H. W. Wilson Company, 1964), 130.

⁴⁰⁰ Nebraska's rises fourteen floors, 433 feet; Florida's state capitol stands twenty-two floors, 322 feet; North Dakota's state capitol rises nineteen stories, 242 feet tall.

⁴⁰¹ The rotunda of Huey Long's beloved Capitol would be the site of his assignation on September 8th, 1935. Thus, this building is also a memorial to Long.

⁴⁰² Its great height was supported by a three-story "base" measuring 199 feet north to south by an astonishing 465 feet east to west. The very top of the tapering slab measured seventy feet north to south by 328 feet east to west.

⁴⁰³ Later, CBS and ABC would join the Associated Press and Warner Communications already headquartered in "greater" Rockefeller Center. These few blocks quickly became the world bastion of the Fourth Estate.

⁴⁰⁴ Carol Herselle Krinsky, Rockefeller Center (New York: Oxford University Press, 1978), 140.

⁴⁰⁵ Lee Lawrie executed the noted frieze above the RCA Building's main entrance at 30 Rockefeller Plaza. Its rather verbose title: "Genius, Which Interprets to the Human Race the Laws and Cycles of the Cosmic Forces of the Universe, Making the Cycles of Light and Sound."

⁴⁰⁶ Walter McQuade, "Deere Does It Again," Fortune Oct. 9, 1978: 165.

⁴⁰⁷ "A New Capitol for the People of North Dakota," The Architectural Forum Feb. 1935: 112.

⁴⁰⁸ Ibid 112.

⁴⁰⁹ The North Dakota State Capitol stood as third tallest skyscraper capitol: Louisiana, thirty-four floors, 450 feet, and Nebraska, fourteen floors, 433 feet.

⁴¹⁰ Reference is to the Woolworth Building (Cass Gilbert, 1913).

⁴¹¹ It must be understood that the Cathedral of Learning has *nothing* to do with religion – it is a purely secular building. It is, though, the world's tallest neo-Gothic building. To es-

tablish a comparison, in feet, the tallest of Europe's Gothic buildings are as follows: Ulm Cathedral (529) in Germany, Cologne Cathedral (512) in Germany, Strassburg Cathedral (468) in England, St. Stephen's Cathedral (441) in Austria, and Salisbury Cathedral (406) in England.

⁴¹² Founded in 1787, this large urban campus boasts a student enrollment of over 26,000 and a faculty count of 2,600. Source: World Almanac Education Group, Inc., *The World Almanac and Book of Facts 2001* (Mahwah, New Jersey: 2001), 283.

⁴¹³ The Commons Room is the skyscraper's centerpiece. Its dimensions are impressive: 100 feet wide, 200 feet long, and a dizzying fifty-two feet high (the equivalent of five stories).

CHAPTER SEVEN: SKYSCRAPERS AND THE SMALL TOWN

⁴¹⁴ Wilcox, Sally "Farmers Bank Block." *Winfield Courier* 3 September 1885. 3 May 2004
<http://www.ausbcomp.com/~bbott/wortman/WinfieldNotedResidences.htm>.



Our revels now are ended. These our actors,
As I foretold you, were all spirits and
Are melted into air, into thin air:
And, like the baseless fabric of this vision,
The cloud-capped towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all which it inherit, shall dissolve
And, like this insubstantial pageant faded,
Leave not a rack behind. We are such stuff
As dreams are made on, and our little life
Is rounded with a sleep.

William Shakespeare (1564-1616)
The Tempest (1611) act 4, sc. 1, l. 148

About The Book

The skyscraper is an American invention that has captured the public's imagination for over a century. The tall building is wholly manmade and borne in the minds of those with both slide rules and computers. *The American Skyscraper 1850-1940: A Celebration of Height* is the story of the skyscraper's rise and the recognition of those who contributed to its development.

What you now are holding is unique. Its approach, information, and images are fresh and telling. The text examines America's first tall buildings, the result of twelve years of in-depth research by an accomplished and published architect and architectural historian. Over three-hundred compelling photographs, charts, and notes make this the ultimate tool of reference for this subject. Biographies are woven throughout with period norms, politics, and lifestyles, helping to place featured skyscrapers in context. Quite simply, *there is no book like this.*

The text, carefully and insightfully written, is clear, concise, and easily digestible; the text is the product of well-documented original research written in an informative tone. *The American Skyscraper 1850-1940: A Celebration of Height* is a richly documented journey of a fascinating topic, and it promises to be a superb addition to any library.

About The Author

Architect Joseph Korom earned a Master of Architecture degree from the University of Wisconsin-Milwaukee, where he also served as mentor. He is an accomplished artist whose paintings are represented in many private collections and is a freelance writer, architectural critic, and photographer. He is a member of the Society of Architectural Historians, the National Trust for Historic Preservation, the Art Institute of Chicago, and the Milwaukee Art Museum. Joseph Korom, who has also authored *Look Up Milwaukee* (1979) and *Milwaukee Architecture A Guide to Notable Buildings* (1995), lives with his wife, two daughters, and their cat in a skyscraper on Milwaukee's East Side.

Cover art by Joseph J. Korom, Jr.

Branden Publishing Company

www.brandenbooks.com
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ISBN-10: 0-828321-88-4
ISBN-13: 978-0-828321-88-4



9 780828 321884

BRANDEN BOOKS

ISBN 9780828321884 \$49.95